

# **Characteristics of Rail and Ferry Station Area Residents in the San Francisco Bay Area: Evidence from the 2000 Bay Area Travel Survey**

**Volume I**



Planning Section  
Metropolitan Transportation Commission  
101 Eighth Street  
Oakland, CA 94607

**September 2006**



**Characteristics of Rail and Ferry Station  
Area Residents in the San Francisco Bay Area:  
Evidence from the 2000 Bay Area Travel Survey**

**Volume I**

Planning Section  
Metropolitan Transportation Commission  
101 Eighth Street  
Oakland, CA 94607-4700

September 2006

## **MTC COMMISSIONERS**

### **Jon Rubin, Chair**

San Francisco Mayor's Appointee

### **John McLemore, Vice Chair**

Cities of Santa Clara County

### **Tom Ammiano**

City and County of San Francisco

### **Irma L. Anderson**

Cities of Contra Costa County

### **Tom Azumbrado**

U.S. Department of Housing  
and Urban Development

### **James T. Beall Jr.**

Santa Clara County

### **Bob Blanchard**

Sonoma County and Cities

### **Mark DeSaulnier**

Contra Costa County

### **Bill Dodd**

Napa County and Cities

### **Dorene M. Giacomini**

U.S. Department of Transportation

### **Scott Haggerty**

Alameda County

### **Anne W. Halsted**

San Francisco Bay Conservation  
and Development Commission

### **Steve Kinsey**

Marin City and Counties

### **Sue Lempert**

Cities of San Mateo County

### **Bijan Sartipi**

State Business, Transportation  
and Housing Agency

### **James P. Spering**

Solano County and Cities

### **Adrienne J. Tissier**

San Mateo County

### **Pamela Torliatt**

Association of Bay Area Governments

### **Shelia Young**

Cities of Alameda County

## **MTC MANAGEMENT STAFF**

### **Steve Heminger**

Executive Director

### **Ann Flemer**

Deputy Executive Director, Operations

### **Andrew Fremier**

Deputy Executive Director,  
Bay Area Toll Authority

### **Therese W. McMillan**

Deputy Executive Director, Policy

## **MTC PROJECT STAFF**

### **Rachel Gossen**

Associate Transportation  
Planner/Analyst (Report Author)

### **Doug Kimsey**

Director, Planning Section

### **Charles L. Purvis**

Principal Transportation Planner/Analyst

### **James Corless**

Senior Transportation Planner/Analyst

### **Valerie Knepper**

Associate Transportation Planner/Analyst

### **Kearey Smith**

GIS Coordinator

### **Garlynn Woodsong**

GIS Analyst

### **Stella Wotherspoon**

GIS Analyst

### **Laurie Kemmel and Michele Stone**

Cover Design and Production

**TABLE OF CONTENTS**  
**VOLUME I**

EXECUTIVE SUMMARY .....	1
SECTION 1: INTRODUCTION.....	3
1.1 Report Structure .....	3
SECTION 2: REVIEW OF EXISTING LITERATURE.....	4
SECTION 3: DATA AND METHODOLOGY .....	6
SECTION 4: RESULTS .....	10
4.1 General Findings .....	10
4.2 Detailed Results by Distance/Density Category.....	11
4.2.1 Demographic Characteristics.....	11
4.2.2 Travel Characteristics.....	14
4.2.3 Household and Person-Level Trip Rates.....	17
4.2.4 Vehicle Miles Traveled.....	18
4.3 Mode Shares for Short Trips .....	20
4.4 Analysis of Station Area Residents by Population Density .....	20
4.5 Proximity of the Home and Work Location to Rail and Ferry Stops.....	22
4.6 San Francisco Residents versus the Remainder of Bay Area Residents.....	26
4.6.1 Work Trips .....	26
4.6.2 Non-Work Trips .....	27
4.6.3 Household and Person-Level Trip Rates.....	30
4.6.4 Vehicle Miles Traveled.....	32
4.6.5 Proximity of Home and Work to Rail/Ferry Stops .....	33
4.7 County Level Results .....	35
4.7.1 Demographic Characteristics by County of Residence .....	35
4.7.2 Travel Characteristics by County of Residence .....	36
4.8 Mode Shares by Proximity to Specific Rail Operators.....	39
4.9 Statistical Modeling.....	41
4.10 Other Analyses.....	41
SECTION 5: SUMMARY AND CONCLUSION .....	42

5.1 Summary of Results .....	42
5.2 Conclusion .....	44
ACKNOWLEDGEMENTS.....	46
REFERENCES .....	47
APPENDIX A: BATS2000 DATA AND BAY AREA RAIL AND FERRY STOPS .....	A-1
APPENDIX B: CIRCULAR VS. WALKABLE BUFFER RESULTS .....	B-1
APPENDIX C: CENSUS DATA .....	C-1
APPENDIX D: DEMOGRAPHIC CHARACTERISTICS, WALKABLE BUFFERS.....	D-1
APPENDIX E: TRAVEL CHARACTERISTICS, WALKABLE BUFFERS .....	E-1
APPENDIX F: TRAVEL CHARACTERISTICS BY PROXIMITY OF HOME AND WORK LOCATION TO RAIL/FERRY STOPS, WALKABLE BUFFERS .....	F-1

**LIST OF TABLES**  
**VOLUME I**

Table 1. Households, Persons, and Vehicles by Proximity to Rail and Ferry Stations.....	12
Table 2. Demographic Characteristics by Proximity to Rail Stations and Ferry Terminals.....	13
Table 3. Work, Non-Work, and Total Trip Mode Shares by Proximity to Rail/Ferry .....	16
Table 4. Per Capita and Household Trip Rates and Transit Use by Proximity to Rail and Ferries .....	18
Table 5. Mode Shares for Trips of One Mile or Less by Proximity to Rail/Ferry.....	20
Table 6. Mode Shares by Trip Purpose and Density for Rail/Ferry Station Areas .....	22
Table 7. BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Work Place to Rail and Ferries .....	23
Table 8. BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Work Place to Rail and Ferries – Workers who Work in San Francisco.....	24
Table 9. BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Work Place to Rail and Ferries – Workers who Work outside of San Francisco ....	25
Table 10. Per Capita and Household Trip Rates and Transit Use by Proximity to Rail and Ferries – SAN FRANCISCO RESIDENTS .....	30
Table 11. Per Capita and Household Trip Rates and Transit Use by Proximity to Rail and Ferries – RESIDENTS LIVING OUTSIDE SAN FRANCISCO .....	31
Table 12. Home-Based Work Trip Mode Shares by Proximity of Home and Work to Rail/Ferries by Place of Residence and Place of Work.....	34
Table 13. Demographic Characteristics by County and Proximity to Rail/Ferry Stops .....	36
Table 14. County-Level Work Trip Mode Shares by Proximity to Rail/Ferry Stops.....	38

**LIST OF FIGURES**  
**VOLUME I**

Figure 1. Walkable and Circular Station Area Buffer Example .....	8
Figure 2. Mode Shares for Total Trips by Proximity to Rail and Ferry Stops.....	10
Figure 3. Trips by Mode and Proximity to Rail/Ferry .....	15
Figure 4. Average Weekday VMT per Household by Proximity to Rail and Ferry Stops .....	19
Figure 5. Average Weekday VMT per Driver by Proximity to Rail and Ferry Stops.....	19
Figure 6. Transit and Non-Motorized Shares by Proximity to Rail/Ferries for San Francisco Residents and Residents Living Outside of San Francisco .....	28
Figure 7. Average VMT per Household for San Francisco and the Remainder of Residents by Proximity to Rail and Ferry Stops.....	32
Figure 8. Average VMT per Driver for San Francisco and the Remainder of Residents by Proximity to Rail and Ferry Stops.....	33
Figure 9. Work and Non-Work Trip Transit Shares by Proximity to Specific Operators.....	40

**TABLE OF CONTENTS**  
**VOLUME II**

APPENDIX G: GIS Analysis Procedures .....	G-1
APPENDIX H: Circular Buffer Analysis Results .....	H-1
Section 1. Bay Area Summary, Circular Buffers.....	H-1
Section 2. San Francisco Residents Summary, Circular Buffers .....	H-21
Section 3. Remainder of Bay Area Residents Summary, Circular Buffers.....	H-33
Section 4. Station Area Residents Summary by Density, Circular Buffers.....	H-45
Section 5. Operator Specific Summary, Circular Buffers .....	H-52
APPENDIX I: San Francisco Residents, Walkable Buffer Results.....	I-1
APPENDIX J: Remainder of Bay Area Residents, Walkable Buffer Results .....	J-1
APPENDIX K: Alameda County Residents, Walkable Buffer Results.....	K-1
APPENDIX L: Contra Costa County Residents, Walkable Buffer Results.....	L-1
APPENDIX M: San Mateo County Residents, Walkable Buffer Results.....	M-1
APPENDIX N: Santa Clara County Residents, Walkable Buffer Results .....	N-1
APPENDIX O: North Bay County Residents, Walkable Buffer Results .....	O-1
APPENDIX P: Operator Specific Summary, Walkable Buffer Results.....	P-1
APPENDIX Q: Linear Regression Results, Walkable Buffer Results .....	Q-1
APPENDIX R: Additional Analyses.....	R-1



## **LIST OF TABLES**

### **VOLUME II**

Table H1.	SAMPLE Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries.....	H-1
Table H2.	WEIGHTED Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries.....	H-2
Table H3.	Demographic Characteristics by Proximity to Rail and Ferry .....	H-3
Table H4.	Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (No. of Households) .....	H-4
Table H5.	Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Column Percent).....	H-5
Table H6.	Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Row Percent).....	H-6
Table H7.	Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (No. of Persons).....	H-7
Table H8.	Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Column Percent).....	H-8
Table H9.	Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Row Percent).....	H-9
Table H10.	BATS2000 Mode Shares by Trip Purpose and Proximity to Rail and Ferries .....	H-10
Table H11.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries .....	H-12
Table H12.	BATS2000 Sample Trips by Mode, Purpose, and Proximity to Rail and Ferries.....	H-14
Table H13.	BATS2000 Household Trip Rates by Proximity to Rail and Ferries .....	H-16
Table H14.	BATS2000 Per Capita Trip Rates and Transit Use by Proximity to Rail and Ferries.....	H-17
Table H15.	VMT per Trip by Proximity to Rail and Ferry Stations .....	H-18
Table H16.	Transit Shares for Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries .....	H-19
Table H17.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries.....	H-20
Table H18.	SAMPLE Distribution of BATS2000 San Francisco Households and Residents by Proximity to Rail and Ferries.....	H-21
Table H19.	WEIGHTED Distribution of BATS2000 San Francisco Households and Residents by Proximity to Rail and Ferries .....	H-22
Table H20.	Demographic Characteristics by Proximity to Rail and Ferry - San Francisco Residents.....	H-23
Table H21.	San Francisco Residents' Mode Shares by Trip Purpose and Proximity to Rail and Ferries .....	H-24
Table H22.	San Francisco Residents' Trips by Purpose and Proximity to Rail/Ferry .....	H-26
Table H23.	San Francisco Households' Trip Rates by Proximity to Rail and Ferries .....	H-28
Table H24.	San Francisco Residents' Trip Rates by Proximity to Rail/Ferry .....	H-29

**LIST OF TABLES (CONTINUED)**  
**VOLUME II**

Table H25.	VMT per Trip by Proximity to Rail and Ferry Stations - San Francisco Residents .....	H-30
Table H26.	Transit Shares for Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - San Francisco Residents.....	H-31
Table H27.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - San Francisco Residents.....	H-32
Table H28.	SAMPLE Distribution of Households and Residents by Proximity to Rail and Ferries - HHs and Residents Outside of San Francisco .....	H-33
Table H29.	WEIGHTED Distribution of Households and Residents by Proximity to Rail and Ferries - HHs and Residents Outside of San Francisco .....	H-34
Table H30.	Demographic Characteristics by Proximity to Rail and Ferry - Remainder of Bay Area Residents .....	H-35
Table H31.	BATS2000 Mode Shares by Trip Purpose and Proximity to Rail and Ferries - Remainder of Bay Area Residents .....	H-36
Table H32.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries Remainder of Bay Area Residents .....	H-38
Table H33.	BATS2000 Household Trip Rates by Proximity to Rail and Ferries Remainder of Bay Area Residents .....	H-40
Table H34.	BATS2000 Per Capita Trip Rates and Transit Use by Proximity to Rail and Ferries - Remainder of Bay Area Residents .....	H-41
Table H35.	VMT per Trip by Proximity to Rail and Ferry Stations - Remainder of Bay Area Residents .....	H-42
Table H36.	Transit Shares for Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - Remainder of Bay Area Residents .....	H-43
Table H37.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - Remainder of Bay Area Residents.....	H-44
Table H38.	SAMPLE Distribution of BATS2000 Households and Residents within 1/2 mile of Rail and Ferries .....	H-45
Table H39.	WEIGHTED Distribution of BATS2000 Households and Residents within 1/2 mile of Rail and Ferries.....	H-45
Table H40.	BATS2000 Mode Shares by Trip Purpose for Residents Living within 1/2 mile of Rail and Ferries.....	H-46
Table H41.	BATS2000 Trips by Mode and Trip Purpose for Residents Living within 1/2 mile of Rail and Ferries.....	H-48
Table H42.	BATS2000 Household Trip Rates and Transit Use for Households within 1/2 mile of Rail and Ferries.....	H-50
Table H43.	BATS2000 Per Capita Trip Rates and Transit Use for Residents Living within 1/2 mile of Rail and Ferries .....	H-51
Table H44.	BATS2000 Mode Shares by Trip Purpose and Proximity to BART .....	H-52
Table H45.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to BART .....	H-54
Table H46.	BATS2000 Mode Shares by Trip Purpose and Proximity to Caltrain .....	H-56
Table H47.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to Caltrain .....	H-58

**LIST OF TABLES (CONTINUED)**  
**VOLUME II**

Table H48.	BATS2000 Mode Shares by Trip Purpose and Proximity to MUNI Light Rail Lines.....	H-60
Table H49.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to MUNI Light Rail Lines.....	H-62
Table H50.	BATS2000 Mode Shares by Trip Purpose and Proximity to VTA Light Rail Stations .....	H-64
Table H51.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to VTA Light Rail Stations .....	H-66
Table I1.	SAMPLE Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - San Francisco Residents.....	I-1
Table I2.	WEIGHTED Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - San Francisco Residents.....	I-2
Table I3.	BATS2000 Demographic Characteristics by Proximity to Rail and Ferries San Francisco Residents.....	I-3
Table I4.	BATS2000 Households by Proximity to Rail and Ferry by Population Density of Block Group - San Francisco Residents .....	I-4
Table I5.	Income Distribution of BATS2000 SAMPLE Households by Proximity to Rail and Ferries (Number of Households) - San Francisco Residents.....	I-5
Table I6.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Number of Households) - San Francisco Residents .....	I-5
Table I7.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Column Percent) - San Francisco Residents .....	I-6
Table I8.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Row Percent) - San Francisco Residents .....	I-6
Table I9.	Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Number of Households) - San Francisco Residents .....	I-7
Table I10.	Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Column Percent) - San Francisco Residents .....	I-8
Table I11.	Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Row Percent) - San Francisco Residents .....	I-9
Table I12.	Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Number of Persons) - San Francisco Residents.....	I-10
Table I13.	Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Column Percent) - San Francisco Residents .....	I-11
Table I14.	Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Row Percent) - San Francisco Residents .....	I-12
Table I15.	BATS2000 Mode Shares by Trip Purpose and Proximity to Rail and Ferries - San Francisco Residents.....	I-13
Table I16.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - San Francisco Residents.....	I-15
Table I17.	BATS2000 SAMPLE Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - San Francisco Residents.....	I-17

**LIST OF TABLES (CONTINUED)**  
**VOLUME II**

Table I18.	BATS2000 Sample Persons by Purpose and Proximity to Rail and Ferries - San Francisco Residents.....	I-19
Table I19.	BATS2000 Household Trip Rates by Proximity to Rail and Ferries San Francisco Residents.....	I-20
Table I20.	BATS2000 Per Capita Trip Rates and Transit Use by Proximity to Rail and Ferries San Francisco Residents.....	I-21
Table I21.	Zone-to-Zone VMT per Trip by Proximity to Rail and Ferry Stations San Francisco Residents.....	I-22
Table I22.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries - San Francisco Residents.....	I-23
Table I23.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - San Francisco Residents.....	I-24
Table I24.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries - San Francisco Residents who Work in San Francisco .....	I-25
Table I25.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - San Francisco Residents who Work in San Francisco .....	I-26
Table I26.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries - San Francisco Residents who Work outside of San Francisco.....	I-27
Table I27.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - San Francisco Residents who Work outside of San Francisco .....	I-28
Table J1.	SAMPLE Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - Remainder of Bay Area Residents.....	J-1
Table J2.	WEIGHTED Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - Remainder of Bay Area Residents.....	J-2
Table J3.	BATS2000 Demographic Characteristics by Proximity to Rail and Ferries Remainder of Bay Area Residents .....	J-3
Table J4.	BATS2000 Households by Proximity to Rail and Ferry by Population Density of Block Group - Remainder of Bay Area Residents.....	J-4
Table J5.	Income Distribution of BATS2000 SAMPLE Households by Proximity to Rail and Ferries (Number of Households) - Remainder of Bay Area Residents .....	J-5
Table J6.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Number of Households) - Remainder of Bay Area Residents.....	J-5
Table J7.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Column Percent) - Remainder of Bay Area Residents.....	J-6
Table J8.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Row Percent) - Remainder of Bay Area Residents.....	J-6
Table J9.	Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Number of Households) - Remainder of Bay Area Residents.....	J-7

**LIST OF TABLES (CONTINUED)**  
**VOLUME II**

Table J10.	Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Column Percent) - Remainder of Bay Area Residents.....	J-8
Table J11.	Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Row Percent) - Remainder of Bay Area Residents.....	J-9
Table J12.	Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Number of Persons) - Remainder of Bay Area Residents.....	J-10
Table J13.	Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Column Percent) - Remainder of Bay Area Residents.....	J-11
Table J14.	Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Row Percent) - Remainder of Bay Area Residents.....	J-12
Table J15.	BATS2000 Mode Shares by Trip Purpose and Proximity to Rail and Ferries - Remainder of Bay Area Residents .....	J-13
Table J16.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - Remainder of Bay Area Residents .....	J-15
Table J17.	BATS2000 SAMPLE Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - Remainder of Bay Area Residents.....	J-17
Table J18.	BATS2000 Sample Persons by Purpose and Proximity to Rail and Ferries - Remainder of Bay Area Residents .....	J-19
Table J19.	BATS2000 Household Trip Rates by Proximity to Rail and Ferries Remainder of Bay Area Residents .....	J-20
Table J20.	BATS2000 Per Capita Trip Rates and Transit Use by Proximity to Rail and Ferries Remainder of Bay Area Residents .....	J-21
Table J21.	Zone-to-Zone VMT per Trip by Proximity to Rail and Ferry Stations Remainder of Bay Area Residents .....	J-22
Table J22.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Remainder of Bay Area Residents .....	J-23
Table J23.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - Remainder of Bay Area Residents.....	J-24
Table J24.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Remainder of Bay Area Residents who Work in San Francisco.....	J-25
Table J25.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – Remainder of Bay Area Residents who Work in San Francisco.....	J-26
Table J26.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Remainder of Bay Area Residents who Work outside of San Francisco .....	J-27
Table J27.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – Remainder of Bay Area Residents who Work outside of San Francisco .....	J-28

**LIST OF TABLES (CONTINUED)**  
**VOLUME II**

Table K1.	SAMPLE Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - Alameda County Residents .....	K-1
Table K2.	WEIGHTED Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - Alameda County Residents .....	K-2
Table K3.	BATS2000 Demographic Characteristics by Proximity to Rail and Ferries Alameda County Residents.....	K-3
Table K4.	BATS2000 Households by Proximity to Rail and Ferry by Population Density of Block Group - Alameda County Residents .....	K-4
Table K5.	Income Distribution of BATS2000 SAMPLE Households by Proximity to Rail and Ferries (Number of Households) - Alameda County Residents.....	K-5
Table K6.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Number of Households) - Alameda County Residents .....	K-5
Table K7.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Column Percent) - Alameda County Residents .....	K-6
Table K8.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Row Percent) - Alameda County Residents.....	K-6
Table K9.	BATS2000 Mode Shares by Trip Purpose and Proximity to Rail and Ferries - Alameda County Residents.....	K-7
Table K10.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - Alameda County Residents.....	K-9
Table K11.	BATS2000 SAMPLE Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - Alameda County Residents .....	K-11
Table K12.	BATS2000 Sample Persons by Purpose and Proximity to Rail and Ferries - Alameda County Residents.....	K-13
Table K13.	BATS2000 Household Trip Rates by Proximity to Rail and Ferries Alameda County Residents.....	K-14
Table K14.	BATS2000 Per Capita Trip Rates and Transit Use by Proximity to Rail and Ferries Alameda County Residents.....	K-15
Table K15.	Zone-to-Zone VMT per Trip by Proximity to Rail and Ferry Stations Alameda County Residents.....	K-16
Table K16.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Alameda County Residents.....	K-17
Table K17.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - Alameda County Residents.....	K-18
Table K18.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Alameda County Residents who Work in San Francisco .....	K-19
Table K19.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – Alameda County Residents who Work in San Francisco .....	K-20



**LIST OF TABLES (CONTINUED)**  
**VOLUME II**

Table K20.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Alameda County Residents who Work outside of San Francisco.....	K-21
Table K21.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – Alameda County Residents who Work outside of San Francisco.....	K-22
Table L1.	SAMPLE Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - Contra Costa County Residents .....	L-1
Table L2.	WEIGHTED Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - Contra Costa County Residents .....	L-2
Table L3.	BATS2000 Demographic Characteristics by Proximity to Rail and Ferries Contra Costa County Residents.....	L-3
Table L4.	BATS2000 Households by Proximity to Rail and Ferry by Population Density of Block Group - Contra Costa County Residents .....	L-4
Table L5.	Income Distribution of BATS2000 SAMPLE Households by Proximity to Rail and Ferries (Number of Households) - Contra Costa County Residents .....	L-5
Table L6.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Number of Households) - Contra Costa County Residents .....	L-5
Table L7.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Column Percent) - Contra Costa County Residents .....	L-6
Table L8.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Row Percent) - Contra Costa County Residents.....	L-6
Table L9.	BATS2000 Mode Shares by Trip Purpose and Proximity to Rail and Ferries - Contra Costa County Residents.....	L-7
Table L10.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - Contra Costa County Residents.....	L-9
Table L11.	BATS2000 SAMPLE Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - Contra Costa County Residents .....	L-11
Table L12.	BATS2000 Sample Persons by Purpose and Proximity to Rail and Ferries - Contra Costa County Residents.....	L-13
Table L13.	BATS2000 Household Trip Rates by Proximity to Rail and Ferries Contra Costa County Residents.....	L-14
Table L14.	BATS2000 Per Capita Trip Rates and Transit Use by Proximity to Rail and Ferries Contra Costa County Residents.....	L-15
Table L15.	Zone-to-Zone VMT per Trip by Proximity to Rail and Ferry Stations Contra Costa County Residents.....	L-16
Table L16.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Contra Costa County Residents.....	L-17
Table L17.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - Contra Costa County Residents .....	L-18

**LIST OF TABLES (CONTINUED)**  
**VOLUME II**

Table L18.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Contra Costa County Residents who Work in San Francisco .....	L-19
Table L19.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – Contra Costa County Residents who Work in San Francisco .....	L-20
Table L20.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Contra Costa County Residents who Work outside of San Francisco.....	L-21
Table L21.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – Contra Costa County Residents who Work outside of San Francisco.....	L-22
Table M1.	SAMPLE Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - San Mateo County Residents.....	M-1
Table M2.	WEIGHTED Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - San Mateo County Residents.....	M-2
Table M3.	BATS2000 Demographic Characteristics by Proximity to Rail and Ferries San Mateo County Residents .....	M-3
Table M4.	BATS2000 Households by Proximity to Rail and Ferry by Population Density of Block Group - San Mateo County Residents.....	M-4
Table M5.	Income Distribution of BATS2000 SAMPLE Households by Proximity to Rail and Ferries (Number of Households) - San Mateo County Residents.....	M-5
Table M6.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Number of Households) - San Mateo County Residents.....	M-5
Table M7.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Column Percent) - San Mateo County Residents.....	M-6
Table M8.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Row Percent) - San Mateo County Residents.....	M-6
Table M9.	BATS2000 Mode Shares by Trip Purpose and Proximity to Rail and Ferries - San Mateo County Residents .....	M-7
Table M10.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - San Mateo County Residents .....	M-9
Table M11.	BATS2000 SAMPLE Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - San Mateo County Residents .....	M-11
Table M12.	BATS2000 Sample Persons by Purpose and Proximity to Rail and Ferries - San Mateo County Residents .....	M-13
Table M13.	BATS2000 Household Trip Rates by Proximity to Rail and Ferries San Mateo County Residents .....	M-14
Table M14.	BATS2000 Per Capita Trip Rates and Transit Use by Proximity to Rail and Ferries San Mateo County Residents .....	M-15
Table M15.	Zone-to-Zone VMT per Trip by Proximity to Rail and Ferry Stations San Mateo County Residents .....	M-16

**LIST OF TABLES (CONTINUED)**  
**VOLUME II**

Table M16.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – San Mateo County Residents .....	M-17
Table M17.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - San Mateo County Residents .....	M-18
Table M18.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – San Mateo County Residents who Work in San Francisco .....	M-19
Table M19.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – San Mateo County Residents who Work in San Francisco .....	M-20
Table M20.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – San Mateo County Residents who Work outside of San Francisco .....	M-21
Table M21.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – San Mateo County Residents who Work outside of San Francisco .....	M-22
Table N1.	SAMPLE Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - Santa Clara County Residents .....	N-1
Table N2.	WEIGHTED Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - Santa Clara County Residents .....	N-2
Table N3.	BATS2000 Demographic Characteristics by Proximity to Rail and Ferries Santa Clara County Residents .....	N-3
Table N4.	BATS2000 Households by Proximity to Rail and Ferry by Population Density of Block Group - Santa Clara County Residents .....	N-4
Table N5.	Income Distribution of BATS2000 SAMPLE Households by Proximity to Rail and Ferries (Number of Households) - Santa Clara County Residents .....	N-5
Table N6.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Number of Households) - Santa Clara County Residents .....	N-5
Table N7.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Column Percent) - Santa Clara County Residents .....	N-6
Table N8.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Row Percent) - Santa Clara County Residents .....	N-6
Table N9.	BATS2000 Mode Shares by Trip Purpose and Proximity to Rail and Ferries - Santa Clara County Residents .....	N-7
Table N10.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - Santa Clara County Residents .....	N-9
Table N11.	BATS2000 SAMPLE Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - Santa Clara County Residents .....	N-11
Table N12.	BATS2000 Sample Persons by Purpose and Proximity to Rail and Ferries - Santa Clara County Residents .....	N-13

**LIST OF TABLES (CONTINUED)**  
**VOLUME II**

Table N13.	BATS2000 Household Trip Rates by Proximity to Rail and Ferries Santa Clara County Residents .....	N-14
Table N14.	BATS2000 Per Capita Trip Rates and Transit Use by Proximity to Rail and Ferries Santa Clara County Residents .....	N-15
Table N15.	Zone-to-Zone VMT per Trip by Proximity to Rail and Ferry Stations Santa Clara County Residents .....	N-16
Table N16.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Santa Clara County Residents .....	N-17
Table N17.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - Santa Clara County Residents.....	N-18
Table N18.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Santa Clara County Residents who Work in San Francisco .....	N-19
Table N19.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – Santa Clara County Residents who Work in San Francisco.....	N-19
Table N20.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Santa Clara County Residents who Work outside of San Francisco .....	N-19
Table N21.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – Santa Clara County Residents who Work outside of San Francisco .....	N-19
Table O1.	SAMPLE Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - North Bay County Residents.....	O-1
Table O2.	WEIGHTED Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries - North Bay County Residents.....	O-2
Table O3.	BATS2000 Demographic Characteristics by Proximity to Rail and Ferries North Bay County Residents.....	O-3
Table O4.	BATS2000 Households by Proximity to Rail and Ferry by Population Density of Block Group - North Bay County Residents.....	O-4
Table O5.	Income Distribution of BATS2000 SAMPLE Households by Proximity to Rail and Ferries (Number of Households) - North Bay County Residents.....	O-5
Table O6.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Number of Households) - North Bay County Residents.....	O-5
Table O7.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Column Percent) - North Bay County Residents .....	O-6
Table O8.	Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Row Percent) - North Bay County Residents .....	O-6
Table O9.	BATS2000 Mode Shares by Trip Purpose and Proximity to Rail and Ferries - North Bay County Residents.....	O-7

**LIST OF TABLES (CONTINUED)**  
**VOLUME II**

Table O10.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - North Bay County Residents.....	O-9
Table O11.	BATS2000 SAMPLE Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries - North Bay County Residents.....	O-11
Table O12.	BATS2000 Sample Persons by Purpose and Proximity to Rail and Ferries - North Bay County Residents.....	O-13
Table O13.	BATS2000 Household Trip Rates by Proximity to Rail and Ferries North Bay County Residents.....	O-14
Table O14.	BATS2000 Per Capita Trip Rates and Transit Use by Proximity to Rail and Ferries North Bay County Residents.....	O-15
Table O15.	Zone-to-Zone VMT per Trip by Proximity to Rail and Ferry Stations North Bay County Residents.....	O-16
Table O16.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – North Bay County Residents.....	O-17
Table O17.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries - North Bay County Residents .....	O-17
Table O18.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – North Bay County Residents who Work in San Francisco .....	O-17
Table O19.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – North Bay County Residents who Work in San Francisco .....	O-17
Table O20.	BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – North Bay County Residents who Work outside of San Francisco.....	O-17
Table O21.	BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – North Bay County Residents who Work outside of San Francisco .....	O-17
Table P1.	BATS2000 Station Area Households and Residents by Operator.....	P-1
Table P2.	BATS2000 Mode Shares by Trip Purpose and Proximity to BART .....	P-2
Table P3.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to BART .....	P-4
Table P4.	BATS2000 Sample Trips by Mode, Purpose, and Proximity to BART.....	P-6
Table P5.	BATS2000 Sample Persons by Purpose and Proximity to BART.....	P-8
Table P6.	BATS2000 Mode Shares by Trip Purpose and Proximity to Caltrain .....	P-9
Table P7.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to Caltrain .....	P-11
Table P8.	BATS2000 Sample Trips by Mode, Purpose, and Proximity to Caltrain.....	P-13
Table P9.	BATS2000 Sample Persons by Purpose and Proximity to Caltrain.....	P-15
Table P10.	BATS2000 Mode Shares by Trip Purpose and Proximity to MUNI Light Rail Stops .....	P-16
Table P11.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to MUNI Light Rail Stops.....	P-18

**LIST OF TABLES (CONTINUED)**  
**VOLUME II**

Table P12.	BATS2000 Sample Trips by Mode, Purpose, and Proximity to MUNI Light Rail Stops.....	P-20
Table P13.	BATS2000 Sample Persons by Purpose and Proximity to MUNI Light Rail Stops.....	P-22
Table P14.	BATS2000 Mode Shares by Trip Purpose and Proximity to VTA Light Rail Stations.....	P-23
Table P15.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to VTA Light Rail Stations.....	P-25
Table P16.	BATS2000 Sample Trips by Mode, Purpose, and Proximity to VTA Light Rail Stations.....	P-27
Table P17.	BATS2000 Sample Persons by Purpose and Proximity to VTA Light Rail Stations.....	P-29
Table Q1.	Linear Regression Results: Transit Share.....	Q-1
Table Q2.	Linear Regression Results: Walk Share .....	Q-2
Table Q3.	Linear Regression Results: Bike Share .....	Q-3
Table R1.	BATS2000 Mode Shares by Trip Purpose and Proximity to High-Quality Bus Lines, Rail and Ferry Stops .....	R-2
Table R2.	Non-Work Trip Shares by Age Group and Proximity to Rail/Ferry Stops .....	R-4
Table R3.	Mode Shares by Trip Purpose and Jobs-to-population Ratio of Station Area for Residents Living within ½ mile of Rail/Ferry Stops.....	R-6
Table R4.	SAMPLE Distribution of BATS2000 Households and Residents by Proximity to High-Quality Bus Lines and Rail/Ferry Stops .....	R-7
Table R5.	WEIGHTED Distribution of BATS2000 Households and Residents by Proximity to High-Quality Bus Lines and Rail/Ferry Stops .....	R-8
Table R6.	BATS2000 Mode Shares by Trip Purpose and Proximity to High-Quality Bus Lines, Rail and Ferries.....	R-9
Table R7.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to High-Quality Bus Lines, Rail and Ferries.....	R-10
Table R8.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to High-Quality Bus Lines, Rail and Ferries.....	R-11
Table R9.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to High-Quality Bus Lines, Rail and Ferries.....	R-12
Table R10.	BATS2000 Household Trip Rates and Transit Use by Proximity to High-Quality Bus Lines, Rail and Ferries.....	R-13
Table R11.	BATS2000 Per Capita Trip Rates and Transit Use by Proximity to High-Quality Bus Lines, Rail and Ferries.....	R-14
Table R12.	BATS2000 Mode Shares by Age Category, Trip Purpose and Proximity to Rail and Ferries .....	R-15
Table R13.	BATS2000 Mode Shares by Age Category, Trip Purpose and Proximity to Rail and Ferries .....	R-16
Table R14.	BATS2000 Sample Trip Makers by Age Category, Trip Purpose and Proximity to Rail and Ferries.....	R-17



**LIST OF TABLES (CONTINUED)**  
**VOLUME II**

Table R15.	Work, Non-Work, and Total Trip Mode Shares for Residents within 1/2 mile of a Rail/Ferry Station by Jobs-to-Population Ratio of Station Area.....	R-18
Table R16.	Work, Non-Work, and Total Weighted Trips for Residents within 1/2 mile of a Rail/Ferry Station by Jobs-to-Population Ratio of Station Area .....	R-19
Table R17.	Sample Persons making Work, Non-Work, and Total Trips for Residents within 1/2 mile of a Rail/Ferry Station by Jobs-to-Population Ratio of Station Area .....	R-20

**LIST OF FIGURES**  
**VOLUME II**

Figure G1. Create a Network Dataset .....	G-2
Figure G2. Network Dataset Wizard .....	G-2
Figure G3. Connectivity Policy.....	G-2
Figure G4. Elevation of Path Segments .....	G-3
Figure G5. Network Dataset Turn Table .....	G-3
Figure G6. Creating Network Impedances.....	G-4
Figure G7. Impedance Evaluators .....	G-4
Figure G8. Direction Settings.....	G-5
Figure G9. Summary of Network Settings.....	G-5
Figure G10. Adding Pedestrian Paths .....	G-7
Figure G11. Calculate Locations .....	G-8
Figure G12. Create Service Area Layer .....	G-9
Figure G13. Load Network Facilities.....	G-10
Figure G14. Setting Service Area Parameters .....	G-11
Figure G15. Service Area Polygon Settings .....	G-12
Figure G16. Generalized Service Area Polygons.....	G-13
Figure G17. Detailed Service Area Polygons .....	G-13

## **EXECUTIVE SUMMARY**

In July 2005, the Metropolitan Transportation Commission (MTC) adopted a development policy that supports transit-oriented development (TOD) in the region. MTC's TOD policy establishes guidelines for development near transit stations and in new corridors and ensures that key stakeholders (both public and private) work cooperatively to create more transit-supportive areas. In support of the TOD policy, this study was undertaken to characterize the demographic and travel characteristics of station area residents – individuals living within close proximity to rail stops and/or ferry terminals in the region – using an existing Bay Area data set, the 2000 Bay Area Travel Survey (BATS2000).

Residents surveyed in BATS2000 were grouped into six categories based on proximity to a rail/ferry station and population density of the area surrounding the household. The six distance/density categories are:

- 1) Residents within ½ mile of rail and ferry stops,
- 2) Residents between ½ mile and 1 mile of rail and ferry stops,
- 3) Residents greater than 1 mile from rail and ferry stops in an urban area,
- 4) Residents greater than 1 mile from rail and ferry stops in a high-suburban area,
- 5) Residents greater than 1 mile from rail and ferry stops in a low-suburban area, and
- 6) Residents greater than 1 mile from rail and ferry stops in a rural area.

Demographic and travel characteristics were then summarized for each group.

## **Key Findings**

Some of the most interesting findings from the BATS2000 study of station area residents are outlined below.

### **✓ People who live close to transit use transit extensively.**

*People living within ½ mile of a rail or ferry station are four times as likely to use transit than people living farther than ½ mile from a rail/ferry stop. Non-motorized mode shares are also high for station area residents who are twice as likely to walk and three times as likely to bike than residents living more than ½ mile from a rail/ferry stop.*

### **✓ People who live and work close to rail/ferry stops use transit even more extensively.**

*Individuals living and working within ½ mile of a rail/ferry stop use transit for 42% of their work commute trips. Individuals who neither live nor work within ½ mile of a station use transit for only 4% of their work commute trips.*

### **✓ San Francisco plays a unique role in transit use in the Bay Area.**

*People who live in San Francisco are much more inclined to use transit than most regional residents, but working in San Francisco also heavily influences transit use. Interestingly, the highest commute trip transit share was found for people who work in San Francisco but live elsewhere and who are close to rail/ferry transit at both trip ends. These residents use transit for 70% of their commute trips.*

✓ **People who live close to transit make as many trips per day as those who live in the rest of the region, but these residents have a much higher tendency to use transit, walk, and bike.**

✓ **Nearly one-third of households living within ½ mile of rail/ferry transit are zero-vehicle households, three times the regional average.**

*Combining this finding with income distribution for households near rail and ferry stops suggests that owning no or fewer vehicles is an individual choice for some people, rather than just as a function of income.*

✓ **People living close to transit are likely to live in smaller households without children.**

*Nonetheless, such households still comprise a variety of household types, with almost 30% of station area households including children, compared with 42% regionally, and 10% being retired households versus 15% regionally.*

✓ **Land use density has an impact on transit use levels, even beyond one-mile from a station.**

*Urban residents outside the one-mile distance from rail/ferry are still twice as likely as suburban residents and about four times as likely as rural residents to use transit (for work and non-work trips combined).*

✓ **Average weekday daily vehicle miles of travel (VMT) increases with distance from rail and ferries and decreasing density.**

*Households within ½ mile of rail stations/ferry produce about half of the VMT of their suburban and rural counterparts.*

✓ **People living close to rail/ferry transit are about twice as likely to walk for short trips (trips of one mile or less) than people living farther from transit.**

*People who live within ½ mile of rail or ferry walk about half of all their short trips (trips of up to one mile), compared with only about one quarter of such trips walked by residents outside this range.*

## **Conclusion**

The results presented in this work clearly indicate that those living (and working) close to rail/ferry transit use transit, walk and bike much more than people living farther from a rail/ferry stop. Whether being near rail/ferry transit simply allows people who prefer to drive less that personal choice, or whether it creates a greater interest in such travel options, this research demonstrates that policies to support transit-oriented development hold promise as one important tool, among others, in addressing congestion, transit usage, non-motorized travel, and air pollution in the Bay Area.

## **SECTION 1: INTRODUCTION**

Transit-oriented development, or TOD, is medium to higher density development in close proximity to transit that includes a good mix of residential and retail spaces and a pleasant pedestrian environment (1). TOD can revitalize neighborhoods, provide affordable housing, and offer financial gains for investors, transit agencies, and nearby businesses. Additionally, TODs can increase transit and non-motorized trips, which relieves congestion and improves air quality by reducing total vehicle miles traveled (VMT) (2). TODs also have the potential to increase physical activity in the form of increased bike and walk trips. While TODs are no panacea, they are a piece of the solution for decreasing congestion, increasing transit ridership, and encouraging more non-motorized travel.

The Metropolitan Transportation Commission (MTC) – the federally designated metropolitan planning organization for the nine-county San Francisco Bay Area – is committed to supporting development policies that support transit-oriented development in the region. In July 2005, MTC adopted a TOD policy that establishes guidelines for development near transit stations and in new corridors. The policy ensures that key stakeholders (both public and private) are able to effectively work together to create more transit-supportive areas (3).

In support of the TOD policy, the current analysis explores quantitative data from the Bay Area to identify the impacts on travel behavior of living within close proximity to rail and ferry stops in the region. Household travel survey data from the San Francisco Bay Area are used to gauge the magnitude of differences in auto, non-motorized, and transit trips based on an individual's proximity to rail stations and ferry terminals. This effort is complementary to the host of other research on TOD, but it takes a regional look at the impact of living within rail/ferry station areas. This work is primarily descriptive in nature, providing a data summary of the Bay Area Travel Survey conducted in year 2000 (BATS2000) based on residents' proximity to rail stops and ferry terminals in the Bay Area.

### **1.1 Report Structure**

This report is divided into two volumes. Volume I includes the main text and select appendices, and it is available in both hard copy and electronic format. The second volume of this report is available only in electronic format and is comprised of several additional appendices.

The remainder of this report is organized as follows. Section 2 provides a review of existing literature on transit-oriented development. The data set and methodology used in this study to summarize travel and demographic characteristics of station area residents is discussed in Section 3. Results of the analysis are provided in Section 4. The final section, Section 5, reviews the key findings of this study and outlines areas of future research.

## **SECTION 2: REVIEW OF EXISTING LITERATURE**

Many studies across the country have demonstrated the positive impacts of transit-oriented development on transit and non-motorized trips. In a study reviewing the potential market for housing near transit as well as the demographics and travel of TOD residents, the Center for Transit-Oriented Development found that 47% of TOD residents in Arlington County, Virginia commuted by transit while only 53% commuted by car, far below the regional average of 83% of trips by car (4). Several areas in New Jersey are making a concerted effort to redevelop their downtowns based on smart growth and TOD. Outlining the success of these transit villages, Renne and Wells used Census Journey to Work data to show that residents of transit villages have a high propensity for using transit and walking to get to work. In some areas, transit and walk-to-work shares were roughly 5% higher in transit villages than the surrounding area (5).

In a study of transit- and auto-oriented neighborhoods in California, Cervero and Gorham found that individuals living near transit averaged far less drive alone trips than persons living in more auto-oriented neighborhoods, and that in the Bay Area, transit-oriented neighborhoods produced considerably more transit and non-motorized trips (70% and 120% more than auto-oriented areas, respectively) (6). Bay Area residents located near transit are, in fact, five times as likely to commute by transit (2). There is also correlation between proximity of the work place and transit use. Cervero and Duncan in their study of Bay Area data found that rail usage was significantly and positively impacted by the work location's close proximity to transit (7). In a separate study of Santa Clara County, California, these same researchers found that high concentrations of jobs within 15 minutes by transit resulted in higher residential property values. Property values were also increased both by proximity to transit and by locating in mixed-use neighborhoods (8).

An individual's proximity to transit is, of course, not the only factor contributing to higher transit and non-motorized trips. Certainly being nearer to transit makes it less difficult to use transit on a frequent or regular basis, but individuals' attitudes regarding transit, the environment, and their access to automobiles are also key in their choice to patronize transit, walk, bike, or drive. In terms of causality, one of the questions raised is whether TODs themselves increase transit ridership or if individuals with a high propensity for using transit choose to locate in TODs. This phenomenon is known as self-selection. It has been argued that self-selection is a factor in the higher transit shares found for residents near TOD.

Work in the Bay Area by Cervero and Duncan found that self-selection (studied through a nested logit model of residential location choice) accounted for 40% of the higher rail-ridership for workers living near transit (7). A study by Kitamura, Mokhtarian and others investigated this very issue and found that "attitudes are at least more strongly, and perhaps more directly, associated with travel than are land use characteristics" suggesting "that land use policies promoting higher densities and mixtures may not alter travel demand materially unless residents' attitudes are also changed." (9).

Regardless of why individuals choose transit, TODs provide transit users with more housing opportunities in the vicinity of transit (as opposed to the parking lots that often surround rail stations, for example). This is a very important aspect of TODs – they "allow those who wish to live near transit to act on their preferences" (7). This has an impact in terms of emissions as well.



As Cervero points out, individuals who patronize transit by driving alone to a rail station emit nearly as many harmful pollutants due to cold starts thus negating the benefits of their transit trip from an air quality standpoint. He notes that a 3-mile park and ride trip is equivalent to a 10-mile solo auto trip in terms of pollutants that are released by the cold-start of the vehicle (10).

Therefore, it is important that individuals who prefer to use transit have the opportunity to access transit by modes other than the private vehicle. TOD offers one way for this to occur.

Literature on travel characteristics of individuals living near transit is fairly consistent and clear in showing that transit and non-motorized shares are higher for those nearer to transit (though there is still debate about exactly why). Since most of these works were drawn from relatively small surveys focused on particular TOD sites or from Census data, this research adds to the body of TOD literature by using a robust regional data set to characterize travel and demographics of residents living near TOD.

### **SECTION 3: DATA AND METHODOLOGY**

Conducted in 2000, the Bay Area Travel Survey (BATS2000) is the rich and unique data source used in this work to study station area residents. BATS2000 surveyed over 15,000 households in the Bay Area over a two-day period. The survey collected socio-demographic and activity information (including travel) from nearly 35,000 residents (See Appendix A for additional BATS2000 information).

Using Geographic Information Systems (GIS), BATS2000 households and residents were parsed into groups based on the household's proximity to rail and ferry stations in the Bay Area (see Volume II, Appendix G for a detailed discussion of the GIS methodology). Only stations or stops that existed in the year 2000 (the year the BATS survey was administered) were examined. The seven rail and ferry operators included in this study are:

1. Altamont Commuter Express (ACE) stations,
2. Amtrak stations,
3. Bay Area Rapid Transit (BART) stations,
4. Caltrain stations
5. Ferry terminals (excluding Alcatraz Island ferries and seasonal ball park ferries),
6. San Francisco Municipal Railway (MUNI light rail lines and cable car stops), and
7. Santa Clara Valley Transit Authority (VTA) light rail stations.

See Appendix A for a regional map showing the rail and ferry stations included in this study as well as a list of specific stations and lines reviewed.

Geographic areas (or buffers) were created around each rail and ferry stop in the Bay Area (in the case of MUNI, buffers were created around the light rail lines). The buffers were created around rail/ferry stops to create three distance categories: within ½ mile, ½ mile to 1 mile, and greater than 1 mile. Households were then placed into one of the three distance categories based on the location of the household with respect to the nearest rail/ferry stop. Households beyond one mile from a rail/ferry station were further disaggregated by population density, which was determined using Census 2000 block group data. The four population density categories are shown in the following table along with examples of cities and communities for each group.

<b>Category</b>	<b>Population Density</b>	<b>Example Cities</b>
Urban	10,000 or more persons/mi <sup>2</sup>	San Francisco, Berkeley, Oakland
High-Suburban	6,000 to 9,999 persons/mi <sup>2</sup>	Palo Alto, Vallejo, Richmond, San Leandro
Low-Suburban	500 to 5,999 persons/mi <sup>2</sup>	Lafayette, Walnut Creek, Sausalito
Rural	Less than 500 persons/mi <sup>2</sup>	Oakland Hills, Point Reyes Station, Guerneville

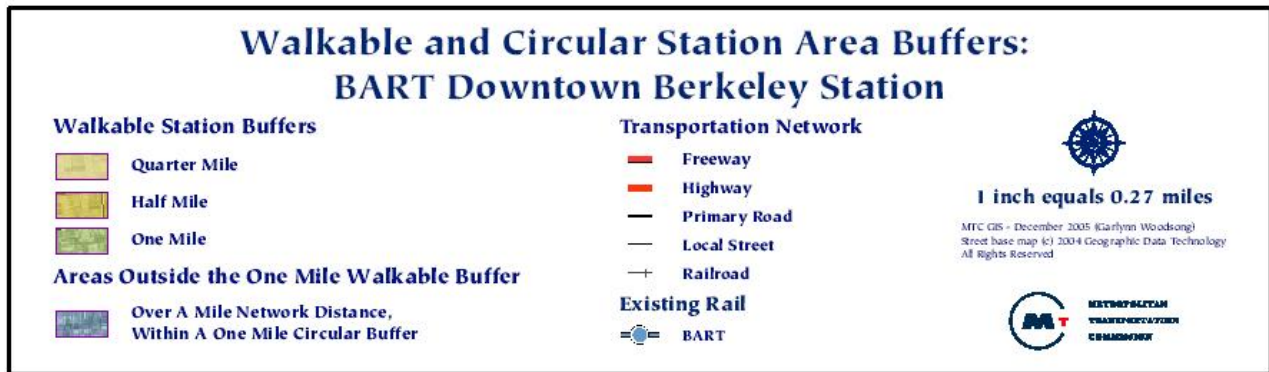
The six resulting distance/density categories are:

1. Residents within ½ mile of rail and ferry stops,
2. Residents between ½ mile and 1 mile of rail and ferry stops,
3. Residents greater than 1 mile from rail and ferry stops in an urban area,
4. Residents greater than 1 mile from rail and ferry stops in a high-suburban area,
5. Residents greater than 1 mile from rail and ferry stops in a low-suburban area, and
6. Residents greater than 1 mile from rail and ferry stops in a rural area.

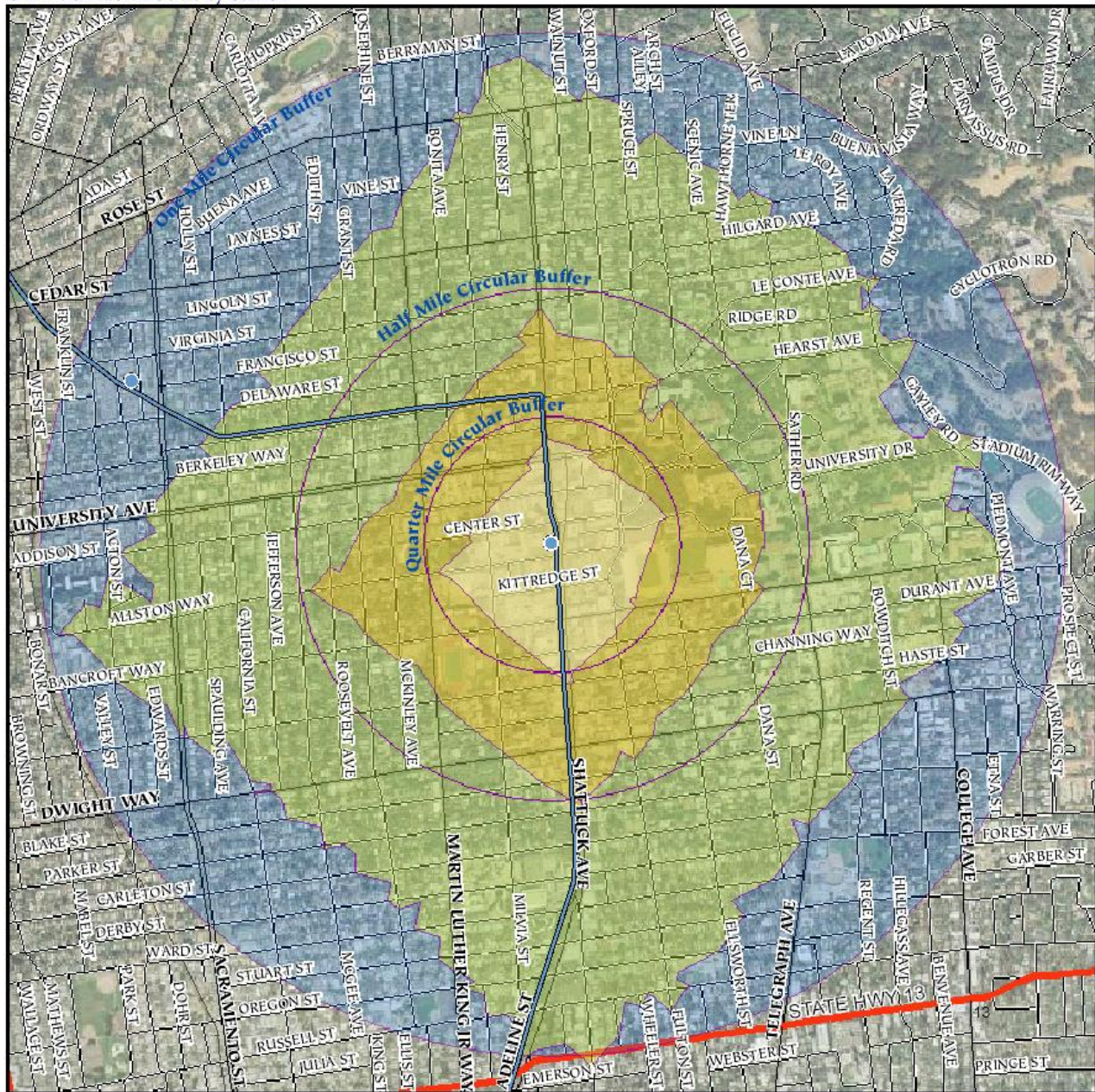
Two methods were used with GIS to create the station buffers and categorize households: (1) a circular buffer analysis and (2) a walkable network buffer analysis. Circular polygons have typically been used to determine the boundaries around a transit stop that reflect the distance most people are willing to walk to access transit. However, this method does not account for the fact that people generally walk along streets to access destinations, and it ignores major barriers like freeways. To account for this, walkable network buffers were created based on the street network surrounding each rail and ferry stop. These walkable buffers represent a closer approximation of the area surrounding the rail/ferry stop that is accessible to pedestrians. Figure 1 shows the circular and walkable network buffers created around the Downtown Berkeley BART station. The diamond-shaped walkable buffers around the station are shown in shades of yellow and green in Figure 1. The surrounding blue buffer represents the 1-mile circular buffer created around the rail station.

The main text of this report only includes results from the walkable network buffer analysis. However, Appendix B provides a comparison of results using the circular and walkable methods as well as additional information on creating the buffers. Volume II of this report includes the complete results using the circular buffer method (Appendix H).

Figure 1. Walkable and Circular Station Area Buffer Example



BART Downtown Berkeley Station







## **SECTION 4: RESULTS**

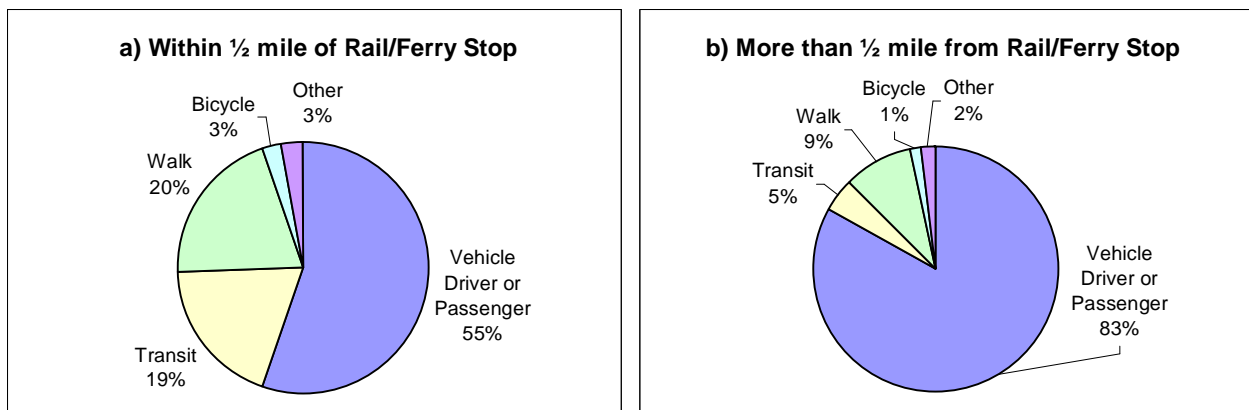
Results for each of the six distance/density categories were compared across groups to determine differences and similarities in demographics and travel patterns by proximity to rail and ferry stations. Results are based on walkable network buffers created around rail and ferry stops that existed in 2000 in the Bay Area.

### **4.1 General Findings**

The BATS2000 data show that individuals who live in close proximity to rail and ferry stations tend to live in one or two person households without children. Households in station areas are also much more likely to own fewer vehicles (zero or one), and while there are higher concentrations of low income residents in station areas, there is still a good mix of income levels near rail/ferry transit. Finally, station area residents (as well as urban residents) tend to be more ethnically diverse than their suburban and rural counterparts.

In terms of mode shares, station area residents displayed higher transit, bike, and walk shares than individuals who live farther from rail and ferry stops. Clear trends emerged where transit and non-motorized shares were significantly higher and vehicle shares were significantly lower the closer an individual lived to rail/ferry transit. At the regional level, individuals with ½-mile access were about four times as likely to use transit, twice as likely to walk, and three times as likely to bike than residents living more than ½ mile from a rail or ferry stop (see Figure 2).

**Figure 2. Mode Shares for Total Trips by Proximity to Rail and Ferry Stops**



Source: Bay Area Travel Survey 2000, see Appendix E Table E5

Further disaggregation of residents based on proximity to station areas and population density shows that differences in transit, non-motorized, and vehicle shares are even more pronounced. The following sections provide more detailed findings for the six distance/density categories.

## **4.2 Detailed Results by Distance/Density Category**

BATS2000 residents were grouped geographically into six categories based on the household's proximity to rail stations and ferry terminals and population density of the area surrounding the household. The six distance/density categories are<sup>1</sup>:

1. Residents within ½ mile of rail and ferry stops,
2. Residents between ½ mile and 1 mile of rail and ferry stops,
3. Residents greater than 1 mile from rail and ferry stops in an urban area,
4. Residents greater than 1 mile from rail and ferry stops in a high-suburban area,
5. Residents greater than 1 mile from rail and ferry stops in a low-suburban area, and
6. Residents greater than 1 mile from rail and ferry stops in a rural area.

Once households were classified into one of the six distance/density groups, demographic and travel characteristics were summarized for each group. The demographic variables reviewed are listed below.

- Household Attributes – household size, income, vehicle availability, bicycle availability, household type (single- or multi-family), tenure, number of workers in the household, in-home web access, and household life cycle category.
- Person Attributes – age, disability status, gender, race/ethnicity, employment status, number of jobs, work status (full vs. part-time), work time flexibility, and student status.

The travel characteristics reviewed include:

- mode shares,
- trip generation rates, and
- vehicle miles traveled.

Only the most salient results are reported here. See Appendix D for tables detailing the socio-demographic attributes listed above for each proximity-to-rail/ferry-category and Appendix E for detailed travel results.

### **4.2.1 Demographic Characteristics**

Table 1 shows select demographic characteristics for the six distance/density categories as well as the regional result for all Bay Area residents. About 25% of the Bay Area's population, over 1.6 million people, live within a station area (within 1 mile of a rail or ferry stop). The remaining 5 million residents live more than 1 mile from rail/ferries: 19% are in urban areas, 50% are in either high- or low-density suburban areas, and just 6% live in rural areas.

There are distinct demographic trends related to proximity to transit and population density. Average household size, vehicles per household, and vehicles per person tend to increase as

---

<sup>1</sup> Throughout the text, categories 3, 4, 5, and 6 are often referred to just as the urban, high-suburban, low-suburban, or rural categories. Additionally, where results are similar, the high- and low-suburban groups are sometimes referred to just as the suburban group.

distance from a rail/ferry station increases and as population density decreases. While ½-mile households average only about one vehicle per household, suburban and rural households average upwards of two vehicles per household as outlined in Table 1.

**Table 1. Households, Persons, and Vehicles by Proximity to Rail and Ferry Stations**

Demographic Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
Total Households	308,400	358,900	440,100	503,800	707,300	147,600	2,466,000
Percent of Households	13%	15%	18%	20%	29%	6%	100%
Total Persons	706,000	926,500	1,239,500	1,409,500	1,930,100	429,400	6,641,100
Percent of Persons	11%	14%	19%	21%	29%	6%	100%
Total Vehicles	352,400	563,100	702,200	946,200	1,458,000	335,100	4,356,900
Percent of Vehicles	8%	13%	16%	22%	33%	8%	100%
Persons per Household	2.29	2.58	2.82	2.80	2.73	2.91	2.69
Vehicles per Household	1.14	1.57	1.60	1.88	2.06	2.27	1.77
Vehicles per Person	0.50	0.61	0.57	0.67	0.76	0.78	0.66

Source: Bay Area Travel Survey 2000

Various household and person-level demographic characteristics are provided in Table 2. The household income distribution - shown in terms of poverty level<sup>2</sup> - indicates that the highest concentrations of low-income households are within rail/ferry station areas (20% and 19%, respectively). However, nearly half of all residents within ½ mile of rail/ferry are in the high-income group.

Vehicle availability is also provided in Table 2. Nearly one-third of households within ½ mile of rail/ferry transit are zero-vehicle households; this is three times the regional average of 10%. Combining this finding with the income distribution for households near rail and ferry stops suggests that low vehicle ownership is not solely a function of income. A similar result was found in Arlington County, Virginia where low car ownership rates near transit stations paired with higher than average median incomes to suggest that low vehicle ownership near transit is also a function of individual choice (4).

An additional measure listed in Table 2 is household life cycle. The life cycle variable groups households by the number of adults, children, and retirees in a household. Over 60% of

<sup>2</sup> Poverty status is based on household size and number of children in the household (see Appendix E for poverty thresholds). To account for the high cost of living in the Bay Area, 200% of the federal poverty level is used as the cut-off point for low-income households.



households within ½ mile of rail/ferry transit are households with one or more working adults but no children. Nearly 30% of ½-mile households are homes with children while 10% are retired households.

**Table 2. Demographic Characteristics by Proximity to Rail Stations and Ferry Terminals**

Demographic Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
HOUSEHOLD INCOME (excluding households not reporting income)							
Low (<200% of Poverty Level)	20%	19%	16%	13%	9%	13%	14%
Medium (201%-500% of Poverty Level)	33%	38%	44%	41%	34%	39%	38%
High (>500% of Poverty Level)	47%	43%	40%	46%	57%	48%	48%
VEHICLE AVAILABILITY							
Zero	29%	14%	11%	6%	2%	2%	10%
One	39%	38%	39%	29%	27%	21%	32%
Two or More	32%	48%	50%	65%	71%	77%	58%
HOUSEHOLD TYPE BY TENURE							
Single-Family, Rent	12%	16%	17%	16%	14%	24%	16%
Single-Family, Own	29%	40%	38%	64%	72%	68%	54%
Multi-Family, Rent	55%	41%	42%	19%	13%	7%	28%
Multi-Family, Own	4%	3%	2%	1%	1%	1%	2%
HOUSEHOLD LIFE CYCLE							
One Adult, No Children	36%	24%	23%	15%	14%	13%	20%
Two or More Adults, No Children	26%	25%	21%	22%	22%	23%	23%
One Adult, With Children	6%	7%	9%	7%	5%	4%	6%
Two or More Adults, With Children	23%	33%	36%	39%	39%	41%	36%
One Adult, Retired, No Children	5%	6%	4%	5%	6%	5%	5%
Two or More Adults, Retired, No Children	5%	6%	7%	11%	14%	14%	10%
RACE / ETHNICITY							
White	46%	45%	33%	55%	67%	67%	53%
Hispanic/Latino	17%	20%	22%	17%	9%	17%	16%
Black/African American	8%	10%	12%	5%	4%	3%	7%
Asian/Pacific Islander	23%	19%	26%	15%	13%	7%	17%
Other	6%	6%	7%	7%	7%	6%	7%
DRIVER'S LICENSE STATUS BY AGE GROUP (excluding persons not reporting age)							
18 - 64	Licensed	89%	91%	92%	94%	97%	94%
	Unlicensed	11%	9%	8%	6%	3%	6%
65 and over	Licensed	69%	72%	64%	77%	88%	79%
	Unlicensed	31%	28%	36%	23%	12%	21%
TOTAL	TOTAL	100%	100%	100%	100%	100%	100%

Source: Bay Area Travel Survey 2000

A review of the person-level demographics in Table 2 suggests that station area and urban residents are more racially and ethnically diverse than their suburban and rural counterparts.

The distribution of driver's license holdings by age group shows interesting trends. Residents between 18 and 64 years of age have slightly lower licensure rates the closer they live to rail/ferry transit. Similarly, licensure rates are lower for seniors with good rail/ferry access and for seniors

who live in urban areas. In fact, urban seniors have the lowest licensure share at 64%. These results suggest that living in an urban environment, particularly areas with good rail and ferry access, makes it easier for individuals to function without a driver's license.

#### **4.2.2 Travel Characteristics**

In this section travel results for the six distance/density groups are reviewed<sup>3</sup>. The findings show transit and non-motorized shares to be significantly higher and auto shares significantly lower the closer an individual resides to a rail or ferry stop. The magnitude of these transit shares varies by county of residence and by proximity of not only the home but also the work location to a rail/ferry stop, but the general trend of decreasing transit and non-motorized shares as the distance from stations increases and density decreases holds.

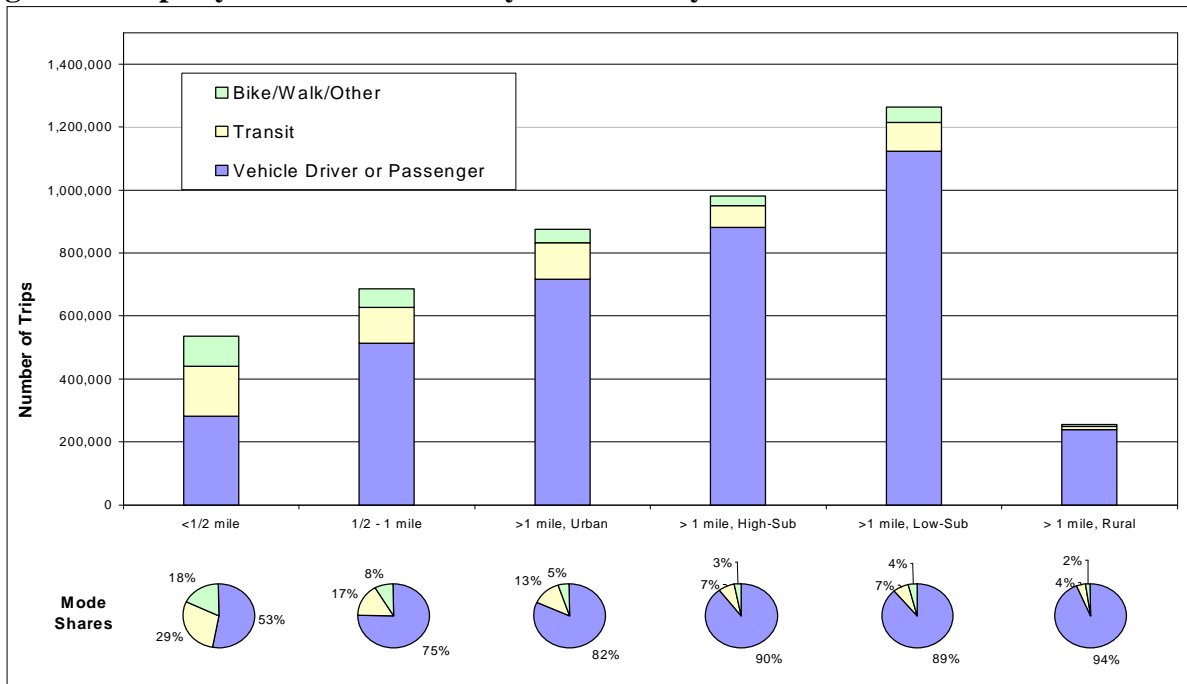
Figure 3 summarizes mode shares by distance/density category for commute trips and for total trips. The majority of daily trips are generated by suburban residents. This is reasonable given that nearly half of the Bay Area's population lives in a suburban area. What the pie charts in Figure 3 show clearly is that transit and non-motorized shares are highest for residents with ½-mile walk access to a station or stop. Shares decline as distance from rail/ferry stops increases and population density decreases. Interestingly, mode splits are quite similar for urban residents and residents between ½ mile and 1 mile from a rail/ferry stop, particularly for total trips. Additionally, high-suburban, low-suburban, and rural residents without walk access to a rail or ferry stop have nearly identical mode shares.

Additional detail for Figure 3 is provided in Table 3, which shows work, non-work, and total trip mode shares by the six distance/density groups as well as the regional average for each mode and trip purpose. Seven modes are displayed in Table 3: vehicle driver or passenger, total transit, rail and ferry, bus, bicycle, walk, and other. To be clear, the total transit mode is a summation of rail, ferry, and bus transit shares. Additional tables in Appendix E show this data for other trip purposes.

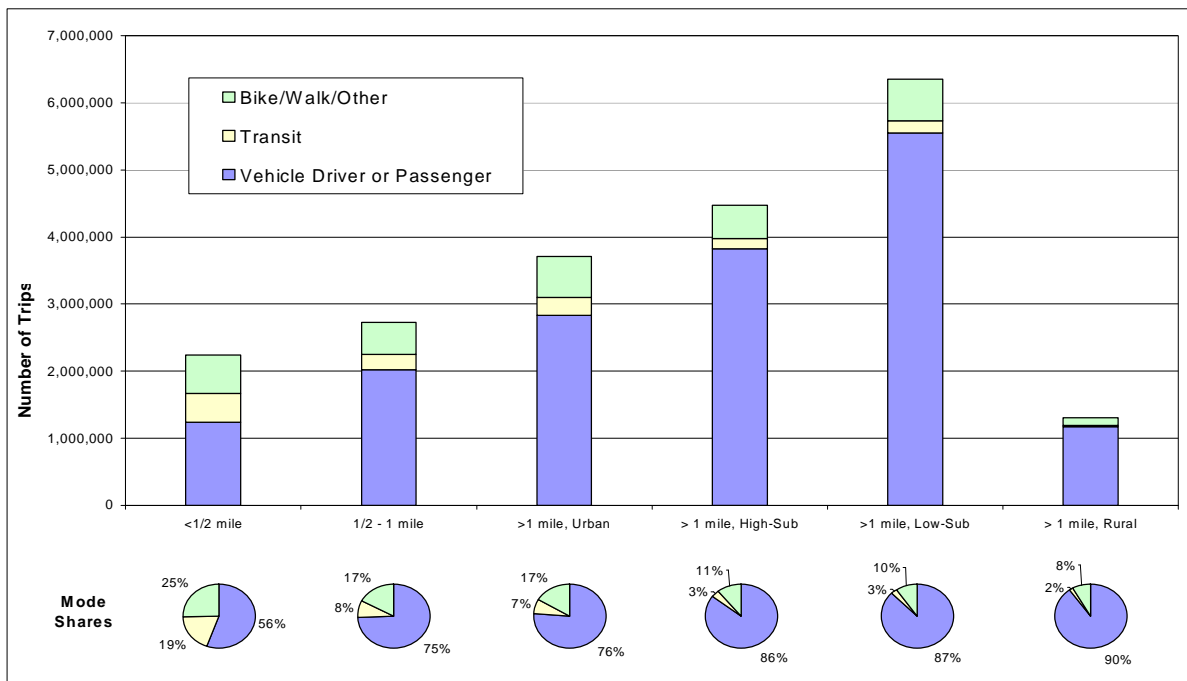
---

<sup>3</sup> Statistical testing was used to compare results across the six distance/density categories. In general, groups with mode shares within 2% to 3% were not found to be significantly different.

**Figure 3. Trips by Mode and Proximity to Rail/Ferry**



**a) Work Trips**



**b) Total Trips**

Source: Bay Area Travel Survey 2000, see Appendix E Tables E1 and E2

**Table 3. Work, Non-Work, and Total Trip Mode Shares by Proximity to Rail/Ferry**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
<i>Home-Based WorkTrips</i>							
Vehicle Driver/Psgr	52.6%	75.1%	81.7%	89.8%	88.8%	94.0%	81.7%
Total Transit	29.4%	16.5%	13.2%	7.1%	7.2%	4.1%	12.2%
Rail and Ferry	15.8%	11.3%	6.7%	4.1%	5.3%	3.4%	7.3%
Bus	13.6%	5.2%	6.5%	3.0%	2.0%	0.8%	4.8%
Bicycle	4.1%	2.8%	0.8%	1.1%	1.6%	0.5%	1.8%
Walk	12.0%	4.3%	2.5%	1.6%	1.8%	1.2%	3.4%
Other	1.8%	1.3%	1.8%	0.3%	0.5%	0.2%	1.0%
<i>Non-Work Trips</i>							
Vehicle Driver/Psgr	56.1%	74.0%	74.5%	84.5%	87.0%	88.9%	79.5%
Total Transit	16.0%	5.7%	5.4%	2.2%	1.8%	1.2%	4.4%
Rail and Ferry	4.9%	2.8%	1.6%	0.7%	1.0%	0.2%	1.6%
Bus	11.1%	2.9%	3.8%	1.5%	0.8%	0.9%	2.8%
Bicycle	2.1%	2.1%	1.3%	1.1%	1.3%	0.6%	1.4%
Walk	22.7%	16.7%	14.8%	9.8%	8.6%	5.8%	12.3%
Other	3.1%	1.5%	4.0%	2.4%	1.4%	3.5%	2.4%
<i>Total Trips</i>							
Vehicle Driver/Psgr	55.3%	74.3%	76.2%	85.6%	87.4%	89.9%	80.0%
Total Transit	19.2%	8.4%	7.2%	3.3%	2.8%	1.7%	6.2%
Rail and Ferry	7.5%	5.0%	2.8%	1.5%	1.8%	0.9%	2.9%
Bus	11.7%	3.5%	4.4%	1.8%	1.0%	0.9%	3.3%
Bicycle	2.6%	2.3%	1.2%	1.1%	1.3%	0.6%	1.5%
Walk	20.1%	13.6%	11.9%	8.0%	7.2%	4.9%	10.3%
Other	2.8%	1.5%	3.5%	1.9%	1.2%	2.9%	2.1%

Source: Bay Area Travel Survey 2000

Results in Table 3 show that for total trips (all trip purposes), total transit shares decrease significantly as distance from stations increases and population density decreases. For all groups, transit shares are highest for home-based work trips. For non-work trips, bus transit shares tend to make up a larger share of the total transit percentage, particularly for 1/2-mile residents. Nearly 70% of non-work transit trips for 1/2-mile residents are made by bus. Bus also competes well with rail/ferry transit for work trips made by the 1/2-mile group. These results imply that residents who have good station area access also have good access to bus service. Another contributing factor to increased transit use is that the majority of station area residents (more than 70%) live in urban areas.

Work trip transit shares in Table 3 show that 1/2-mile residents are between four and seven times as likely than suburban and rural residents to commute by transit. Half-mile residents average a 29% transit share, more than twice the regional average of 12%. Walk shares are also significantly higher for 1/2-mile residents than for suburban and rural workers. The 12% walk share for 1/2-mile residents is more than six times higher than the walk shares for high-suburban, low-suburban, and rural residents, which hover around 1.5%. While transit and walk shares for 1/2-mile to 1-mile residents and urban residents are lower than the 1/2-mile group, they are still

significantly higher (one and a half to four times higher) than work trip shares for suburban and rural residents.

When work and non-work trips are compared, a few interesting results are evident. Firstly, transit shares are lower across all groups for non-work trips as compared to work trips, as previously mentioned. Bike shares follow this same trend but are just slightly lower for most groups for non-work trips. Conversely, walk shares are significantly higher for non-work trips – ranging from 4.5% to 12.5% higher than work trip walk shares. Across groups, non-work transit shares are still highest for the ½-mile group and decrease as distance increases and density decreases. Half-mile residents are between three and thirteen times more likely than other residents to use transit for non-work trips.

#### **4.2.3 Household and Person-Level Trip Rates**

Trips made by residents in each of the six groups were normalized by the number of trip makers in each group to determine household and per capita trip rates. Results are provided in Table 4. Station area households average the fewest total trips per household. However, at the per capita level, ½-mile residents are on par with residents of high-density suburban areas and rural areas. The high trip rate for ½-mile residents (3.2 total trips per person per day) is likely a reflection of the small household sizes for individuals in this category. Individuals who live alone tend to make more trips to satisfy social needs not being met by living alone. Additionally, single person households do not have other members available to share the burden for basic household maintenance trips.

Table 4 indicates that vehicle driver trips per household and per person increase and transit trips decrease across the six distance/density categories. Per capita transit trip rates for ½-mile residents are about two and a half times higher than ½-mile to 1 mile and urban residents and about six times higher than suburban residents. Compared to rural residents, ½-mile residents average more than eleven times the number of transit trips per day. Bicycle trip rates for ½-mile residents are almost twice the regional average and are between two and five times higher than residents living more than 1 mile from a rail or ferry stop. The same is true for per capita walk trip rates.

Transit usage is also shown in Table 4. In the case of households, if one member used transit at least once during the two-day survey period, the household was flagged as a transit-using household. Similarly, for individuals, if a person used transit at least once, s/he was labeled a transit-using person. The results show that the likelihood of using transit is significantly higher for persons and households that are within ½ mile of a rail stop or ferry terminal. At the person level, ½-mile residents are nearly three times as likely to use transit than the average regional resident. The difference is most pronounced between ½-mile residents and rural residents, where station-area residents are roughly eleven times more likely than rural residents to use transit at least once.

**Table 4. Per Capita and Household Trip Rates and Transit Use by Proximity to Rail and Ferries**

Travel Characteristic	Proximity of Household to Rail Station or Ferry Terminal						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
<u>Vehicle Driver Trips</u>							
per Person	1.194	1.531	1.545	1.867	2.031	1.917	1.739
per Household	2.735	3.952	4.352	5.223	5.542	5.576	4.684
<u>Transit Trips</u>							
per Person	0.610	0.247	0.216	0.105	0.094	0.053	0.193
per Household	1.396	0.639	0.609	0.294	0.256	0.154	0.519
<u>Bicycle Trips</u>							
per Person	0.081	0.067	0.036	0.035	0.044	0.017	0.046
per Household	0.186	0.172	0.100	0.098	0.119	0.049	0.123
<u>Walk Trips</u>							
per Person	0.639	0.400	0.356	0.255	0.238	0.150	0.323
per Household	1.464	1.032	1.003	0.713	0.650	0.435	0.870
<u>Total Trips</u>							
per Person	3.173	2.943	2.995	3.173	3.291	3.032	3.133
per Household	7.266	7.598	8.435	8.876	8.980	8.819	8.436
TRANSIT USE <sup>1</sup>							
Transit-Using Population	33.6%	14.7%	13.4%	7.2%	6.2%	3.2%	11.7%
Transit-Using Households	48.4%	28.8%	27.8%	15.0%	14.0%	6.8%	22.7%

<sup>1</sup>. Percent of residents who used transit at least once during the two-day survey period. In the case of transit-using households, it is the percent of households where one or more members used transit at least once during the two-day survey period.

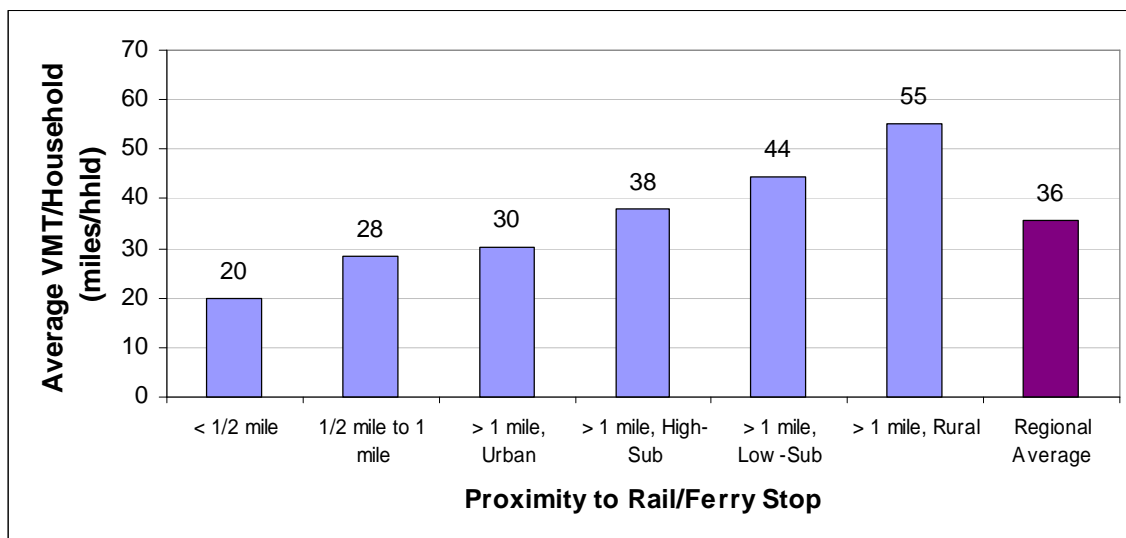
Source: Bay Area Travel Survey 2000

#### **4.2.4 Vehicle Miles Traveled**

Figures 4 and 5 provide information regarding average weekday daily vehicle miles traveled (VMT) for the six proximity-to-rail-ferry/density categories. VMT was calculated by appending zone to zone distances from MTC's modeling system to individual BATS2000 trip records (vehicle driver trips only) that had both origin and destination location information (approximately 10% of trips in the survey had missing information for the origin and/or destination). Average values for VMT were appended to records with missing information to estimate total weekday daily VMT for the region. It should also be noted that VMT is based solely on intraregional trips (trips that both begin and end within the 9-county Bay Area).

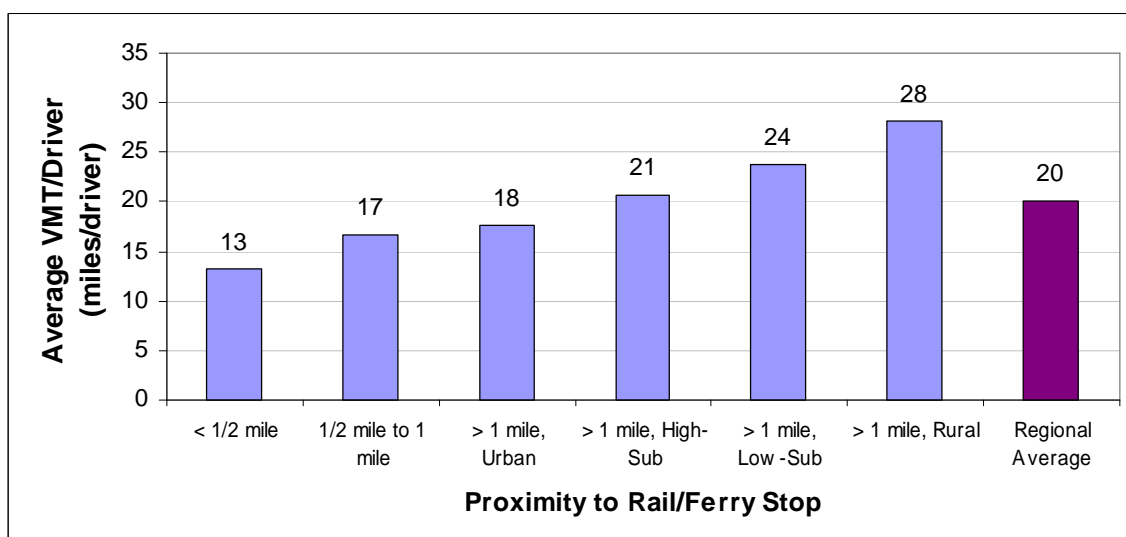
Average VMT per household – provided in Figure 4 – increases with distance from rail and ferries and decreasing density. Households within ½ mile of a station produced between 47% and 60% fewer vehicle miles than suburban and rural households. Average VMT for ½-mile to 1-mile and urban households is roughly the same at about 29 daily vehicle miles per household; this is still 40% higher than the average VMT for a station area household. Household size, particularly number of drivers in the household, does play a part. However, when VMT per driver is reviewed, the general trend still holds: VMT per driver increases as distance from rail/ferry increases and as density decreases (see Figure 5). VMT per driver for ½-mile residents is still between 30% and 50% lower than VMT for suburban and rural residents.

**Figure 4. Average Weekday VMT per Household by Proximity to Rail and Ferry Stops**



Source: Bay Area Travel Survey 2000

**Figure 5. Average Weekday VMT per Driver by Proximity to Rail and Ferry Stops**



Source: Bay Area Travel Survey 2000

### 4.3 Mode Shares for Short Trips

Mode shares for short trips – trips of one mile or less – are discussed in this section. Nearly 27% of all trips in the BATS2000 data are less than or equal to one mile in length (based on zone to zone distances). If more people chose non-motorized modes for these trips rather than driving, much would be saved in terms of the number of vehicle trips, vehicle miles traveled, and emissions released from these short trips. Table 5 shows vehicle driver/passenger, transit, and non-motorized shares for short trips for the six proximity to rail/ferry groups. About half of all short trips made by ½-mile residents are walk trips while ½-mile to 1-mile and urban residents walk for roughly 35% of short trips. Suburban and rural residents walk for less than a quarter of short trips. Table 5 also indicates that ½-mile residents are much more likely than other residents to use transit for short trips (more than three times as likely than any other group).

**Table 5. Mode Shares for Trips of One Mile or Less by Proximity to Rail/Ferry**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
MODE SHARES							
Vehicle Driver/Psgr	36.7%	57.0%	58.4%	72.4%	73.9%	77.2%	63.2%
Total Transit	9.1%	2.1%	3.2%	0.8%	0.5%	0.1%	2.5%
Rail and Ferry	1.2%	0.5%	0.7%	0.0%	0.1%	0.0%	0.4%
Bus	7.9%	1.7%	2.6%	0.8%	0.4%	0.1%	2.1%
Bicycle	2.9%	3.5%	2.5%	2.2%	2.4%	1.6%	2.6%
Walk	49.5%	35.7%	33.6%	23.0%	22.2%	17.5%	30.1%
Other	1.8%	1.7%	2.3%	1.5%	1.1%	3.5%	1.7%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
WEIGHTED TRIPS							
Vehicle Driver/Psgr	254,328	438,861	563,174	802,635	1,049,971	124,857	3,233,825
Total Transit	63,077	16,520	30,897	9,216	6,483	216	126,409
Rail and Ferry	8,508	3,715	6,313	486	1,480	43	20,545
Bus	54,569	12,805	24,584	8,730	5,003	173	105,864
Bicycle	20,342	26,732	24,014	24,502	34,296	2,654	132,540
Walk	342,701	274,803	323,859	255,450	314,996	28,320	1,540,129
Other	12,235	13,292	22,043	16,699	15,710	5,733	85,712
TOTAL	692,682	770,209	963,987	1,108,502	1,421,455	161,779	5,118,614

Source: Bay Area Travel Survey 2000

### 4.4 Analysis of Station Area Residents by Population Density

To examine differences between station area residents based on the type of area in which they live, mode shares and trip rates were summarized for residents within 1 mile of a rail or ferry stop by population density category. Due to low samples of rural density households within ½-mile or 1-mile of a rail/ferry stop, the rural category was combined with the low-suburban category to report results.



Table 6 shows work, non-work, and total mode shares for station area residents based on population density of the area surrounding the household. Recall that Census block groups were used to determine population density. The four density categories are:

- 1) urban – more than 10,000 persons per square mile,
- 2) high-suburban – between 6,000 and 10,000 persons per square mile,
- 3) low-suburban – between 500 and 6,000 persons per square mile, and
- 4) rural – less than 500 persons per square mile.

Residents within ½ mile of a stop and living in an urban area have the highest transit and non-motorized shares for both work and non-work trips (32% work-trip transit share for urban ½-mile residents vs. 20% for lower-density ½-mile residents).

The difference is even more pronounced for walk shares. Urban ½-mile residents average a 15% walk-to-work share – approximately five times higher than walk shares for low-density ½-mile residents. A similar trend is evident for non-work trips. Half-mile, urban residents make 18% of non-work trips by transit while high-suburban and low-suburban/rural residents average only 7% and 6% of non-work trips by transit, less than half the urban residents' share. The differences in walk shares are not as pronounced for non-work trips. However, an additional finding is that urban residents in the ½-mile to 1-mile group also have very high non-work walk shares, nearly on par with urban ½-mile residents (21% vs. 24%). This highlights the fact that walking is more prevalent in urban environments. However, for lower density areas, walk shares are still higher for ½-mile residents than for ½-mile to 1-mile residents.

Another point regarding results in Table 6 is that in general, ½-mile residents in high-suburban and low-suburban/rural areas behave similarly to urban residents between ½-mile and 1-mile from a rail/ferry stop. Similarly, residents in high-suburban and low-suburban/rural areas between ½-mile and 1-mile from rail/ferry stops behave similarly in terms of mode shares.

Compared with previous results for residents farther than 1 mile from a rail/ferry stop, walk shares are still generally higher for residents closer to station areas even after stratifying by population density. This suggests that some other attribute of station areas contributes to the higher propensity to use transit or walk aside from the impact of living in a more urban environment.

**Table 6. Mode Shares by Trip Purpose and Density for Rail/Ferry Station Areas**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile			1/2 mile to 1 mile			
	Urban	High-Sub	Low-Sub/ Rural	Urban	High-Sub	Low-Sub/ Rural	
MODE SHARES							
Home-Based Work							
Vehicle Driver/Psgr	47.6%	75.6%	64.7%	71.0%	80.2%	80.4%	65.2%
Total Transit	31.9%	20.4%	18.7%	19.7%	11.5%	14.2%	22.2%
Rail and Ferry	15.8%	15.5%	16.2%	12.4%	8.8%	12.2%	13.3%
Bus	16.1%	4.9%	2.6%	7.2%	2.8%	2.0%	8.9%
Bicycle	4.1%	0.9%	10.9%	3.5%	2.4%	0.9%	3.4%
Walk	14.5%	2.6%	2.4%	4.9%	3.4%	4.2%	7.7%
Other	1.9%	0.6%	3.3%	0.9%	2.5%	0.3%	1.5%
Non-Work Trips							
Vehicle Driver/Psgr	52.2%	73.6%	70.4%	67.7%	83.0%	80.0%	65.9%
Total Transit	18.3%	7.0%	5.8%	8.2%	2.1%	3.5%	10.4%
Rail and Ferry	5.0%	4.6%	4.1%	3.5%	1.3%	3.0%	3.7%
Bus	13.3%	2.4%	1.7%	4.6%	0.7%	0.5%	6.6%
Bicycle	2.1%	1.2%	4.0%	2.3%	2.2%	1.0%	2.1%
Walk	24.1%	16.0%	18.3%	20.5%	10.6%	14.2%	19.4%
Other	3.4%	2.2%	1.5%	1.3%	2.1%	1.3%	2.2%
Total Trips							
Vehicle Driver/Psgr	51.1%	74.1%	69.0%	68.6%	82.3%	80.1%	65.7%
Total Transit	21.5%	10.4%	9.1%	11.1%	4.5%	6.1%	13.3%
Rail and Ferry	7.5%	7.3%	7.1%	5.8%	3.2%	5.2%	6.1%
Bus	14.0%	3.1%	1.9%	5.3%	1.2%	0.9%	7.2%
Bicycle	2.5%	1.1%	5.7%	2.6%	2.2%	1.0%	2.4%
Walk	21.8%	12.6%	14.3%	16.6%	8.8%	11.8%	16.5%
Other	3.0%	1.8%	2.0%	1.2%	2.2%	1.0%	2.1%

Source: Bay Area Travel Survey 2000

**4.5 Proximity of the Home and Work Location to Rail and Ferry Stops**

Resident workers were grouped based not only on their home's proximity to transit but also on the proximity of their work location to a rail or ferry station. The hypothesis being that workers who both live and work near rail/ferry transit would have higher transit and non-motorized shares and lower personal vehicle shares than workers without good transit access on the home or work end of the trip. Table 7 shows commute mode shares for workers based on proximity of the home and work location to a rail or ferry stop. There are four groups summarized in Table 7:

- 1) workers who live and work within 1/2-mile of rail/ferry,
- 2) workers who live within 1/2-mile of a station but work more than 1/2 mile from rail/ferry,
- 3) workers who live more than 1/2-mile from a station but work within 1/2 mile of rail/ferry, and
- 4) workers who neither live nor work near a rail/ferry stop.

Workers in group 1 – those with good rail/ferry access on both ends of the work trip – have the highest average commute trip transit share of 42%. This is 3.5 times the regional commute trip transit share of 12% and more than ten times the commute trip transit share for workers without good rail/ferry access at the home or work end (42% for group 1 vs. 4% for group 4). The average vehicle driver/passenger share for workers who live and work near rail/ferry transit is 34%, which is less than half the regional average of 81%. This is a staggering difference in in-vehicle shares.

Bicycle and walk shares are also highest for workers who live and work near rail/ferry stops. Walk shares show the largest difference with workers in group 1 averaging an 18% walk share for work trips, nine times more than group 4 (2% walk-to-work share) and six times higher than the regional home-based work walk split of 3%. See Appendix F for more detailed tables based on the home and work location.

**Table 7. BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Work Place to Rail and Ferries**

Proximity of Household to Rail Station or Ferry Terminal	Commute Mode	Proximity of Work to Rail Station or Ferry Terminal		
		Work Within 1/2 mile	Work Greater than 1/2 mile	Total
Home Within 1/2 mile	Vehicle Driver/Psgr	34%	74%	52%
	Total Transit	42%	16%	30%
	Bicycle	5%	4%	4%
	Walk	18%	5%	12%
Home Greater than 1/2 mile	Vehicle Driver/Psgr	67%	91%	85%
	Total Transit	28%	4%	10%
	Bicycle	1%	2%	1%
	Walk	2%	2%	2%
Total	Vehicle Driver/Psgr	60%	90%	81%
	Total Transit	31%	5%	12%
	Bicycle	2%	2%	2%
	Walk	6%	2%	3%

Source: Bay Area Travel Survey 2000

An important point to remember about the Bay Area is that it includes the city of San Francisco. San Francisco is the urban hub of the region – it contains many of the region’s jobs, parking is difficult, and transit service is ubiquitous. In fact, the MUNI system (bus and light rail) carries nearly 50% of all transit riders within the nine Bay Area counties (11). Therefore, it is important to keep in mind the impact of locations (home and work) that are within the city of San Francisco. To account for the impact of working in San Francisco, work trip mode shares were reviewed based on whether the work county was San Francisco or the remainder of the Bay Area. The

expectation was that transit and non-motorized shares would be higher for San Francisco workers, particularly those working within ½-mile of a rail or ferry stop in the city of San Francisco.

Tables 8 and 9 show the results of separating workers who work in San Francisco (Table 8) and workers who work outside of San Francisco (Table 9). Regionally, about 18% of workers work in San Francisco (54% of San Francisco workers live in San Francisco while the remaining 46% live outside of San Francisco).

**Table 8. BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Work Place to Rail and Ferries – Workers who Work in San Francisco**

Proximity of Household to Rail Station or Ferry Terminal	Commute Mode	Proximity of Work to Rail Station or Ferry Terminal (San Francisco Work Locations only)		
		Work Within 1/2 mile	Work Greater than 1/2 mile	Total
Home Within 1/2 mile	Vehicle Driver/Psgr	25%	58%	32%
	Total Transit	45%	20%	40%
	Bicycle	6%	7%	6%
	Walk	21%	13%	19%
Home Greater than 1/2 mile	Vehicle Driver/Psgr	43%	70%	49%
	Total Transit	52%	20%	45%
	Bicycle	1%	2%	1%
	Walk	3%	7%	4%
Total	Vehicle Driver/Psgr	37%	66%	43%
	Total Transit	50%	20%	44%
	Bicycle	2%	4%	3%
	Walk	9%	9%	9%

Source: Bay Area Travel Survey 2000

The results in Tables 8 and 9 show that transit shares across the four home/work proximity groups are higher for workers who work in San Francisco. Transit and non-motorized shares combined make up 72% of the work trip transit share for Bay Area residents who live near rail/ferry and who work in San Francisco near a rail/ferry stop. However, transit shares are highest for workers who do not live near a rail/ferry stop but who work near a rail/ferry stop in San Francisco (52% total transit share – 34% is rail/ferry while 18% is bus transit). Recall that 46% of San Francisco workers live outside of San Francisco. Rail and ferry shares for these commuters are likely increasing the transit share for this group.

What may be more interesting are the results in Table 9 for workers who work outside of San Francisco. More than 30% of work trips made by residents who live in a station area and work in a station area outside of San Francisco are made by transit, and two-thirds of these transit trips

are by the rail or ferry mode (see Table F5 in Appendix F). This 31% commute trip transit share is more than 5 times the regional average for workers who work outside of San Francisco (6%), and nearly eight times the average transit share for workers employed outside of San Francisco without good rail/ferry access on either end of the home to work trip (4%).

Work-trip walk shares are significantly lower for workers who work outside of San Francisco than for those who work in San Francisco, but walk shares for individuals who work outside of San Francisco are still highest for those who live and work within a station area (7% vs. 2%).

Finally, in-vehicle shares (vehicle driver and vehicle passenger shares) are 30% less for workers who work outside of San Francisco with station access on both ends of the home-to-work trip than those without station access on either end (60% in-vehicle share vs. 92% in-vehicle share).

**Table 9. BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Work Place to Rail and Ferries – Workers who Work outside of San Francisco**

Proximity of Household to Rail Station or Ferry Terminal	Commute Mode	Proximity of Work to Rail Station or Ferry Terminal (Work Locations Outside of San Francisco)		
		Within 1/2 mile	Greater than 1/2 mile	Total
Within 1/2 mile	In-Vehicle Person	60%	79%	74%
	Total Transit	31%	14%	19%
	Bicycle	2%	3%	2%
	Walk	7%	3%	4%
Greater than 1/2 mile	In-Vehicle Person	85%	92%	91%
	Total Transit	11%	4%	5%
	Bicycle	1%	2%	2%
	Walk	2%	2%	2%
Total	In-Vehicle Person	82%	91%	90%
	Total Transit	13%	4%	6%
	Bicycle	1%	2%	2%
	Walk	3%	2%	2%

Source: Bay Area Travel Survey 2000

What Tables 7, 8 and 9 reveal is that vehicle driver/passenger shares are lowest and transit trips are highest for those with rail/ferry station access on both ends of the trip, even after controlling for work locations in San Francisco. Transit and non-motorized shares will be even higher if the workplace is in San Francisco. What Tables 8 and 9 do not take into consideration is the county of residence for the workers being summarized. As previously mentioned, living in San Francisco makes quite a difference. Due to the extent of MUNI service and ridership as well as the nature of San Francisco as a very dense urban environment (one big TOD?), a portion of this analysis separated San Francisco residents from the remainder of Bay Area residents and reviewed the

travel characteristics of each group. The following section shows the impact on travel behaviors of living in San Francisco.

#### **4.6 San Francisco Residents versus the Remainder of Bay Area Residents**

As previously mentioned, half of all transit riders in the Bay Area patronize MUNI, the rail and bus service offered in the city (and county) of San Francisco (11). Transit service is ubiquitous in “The City”, and nearly all of San Francisco is an urban environment in terms of population density. To investigate differences between Bay Area residents who live within and outside of San Francisco, travel was summarized for San Francisco residents and for the remainder of Bay Area residents. Driving this portion of the analysis is the desire to better-understand travel patterns of residents living outside of San Francisco, particularly in terms of proximity to rail and ferry stops. Do residents who live outside of San Francisco use transit more often if they are in close proximity to rail/ferry? Or, are the regional results heavily influenced by the travel behavior of San Francisco residents?

Figure 6 outlines transit and non-motorized mode shares for residents who live within and outside of San Francisco. Transit shares are broken into two components: rail/ferry shares and bus shares. Similarly, non-motorized trips are shown separately for the bike and walk mode. Figure 6 also provides results for work and non-work trips. The reader will note that Figures 6a and 6c do not include results for San Francisco residents who live more than 1 mile from a rail or ferry stop and in lower-density areas due to insufficient sample sizes for these groups. As previously mentioned, nearly all of San Francisco is considered urban in terms of population density. When reviewing results for San Francisco residents, it is important to note that more than half of all San Francisco residents live within ½ mile of a rail or ferry stop. Results for Figure 6 are discussed in detail in the following sections.

##### **4.6.1 Work Trips**

Transit and non-motorized shares for San Francisco residents’ commute trips are quite high across all distance/density groups (Figure 6a). San Francisco residents living within walking distance (< 1 mile) of a rail or ferry stop are much more likely to use rail or ferry to get to and from work than San Francisco residents who live more than 1 mile from a stop. Half-mile and ½-mile to 1-mile residents have rail/ferry shares of 17% and 20%, respectively. San Francisco residents living more than 1 mile from a rail or ferry stop and consequently near only bus stops are much more likely to use bus transit for the work trip (26% bus share versus 17% and 13% for ½-mile and ½-mile to 1-mile residents). However, total transit shares across the three groups are roughly the same. Approximately 33% of work trips made by San Francisco residents are by transit.

An interesting finding for the ½-mile group is that their commute trip bicycle and walk shares are significantly higher than other San Francisco residents. The higher bike and walk shares for ½-mile San Francisco residents is likely due to the fact that many of these workers live in close proximity to work as well as transit and are able to easily walk and/or bike between home and work. The walk to work may not be quite as easy for residents outside of San Francisco who, based on the results in Figure 6b, have much lower walk-to-work shares than San Francisco residents.

Results for residents living outside of San Francisco are provided in Figure 6b for transit and non-motorized commute shares. Compared to regional averages for San Francisco and the remainder of residents combined, transit and non-motorized shares for the station area and urban residents are lower, particularly for the ½-mile group. Recall that Table 3 provided mode shares by purpose for the region by the six distance/density categories. Summing transit and non-motorized work trip shares in Table 3 yields the following results for the six groups and the entire region:

- ½-mile residents – 46% transit and non-motorized work trip share,
- ½-mile to 1-mile residents – 23% transit and non-motorized work trip share,
- > 1 mile, urban residents – 18% transit and non-motorized work trip share,
- > 1 mile, high-suburban residents – 10% transit and non-motorized work trip share,
- > 1 mile, low-suburban residents – 11% transit and non-motorized work trip share,
- > 1 mile, rural residents – 6% transit and non-motorized work trip share, and
- Total Bay Area residents – 17% transit and non-motorized work trip share.

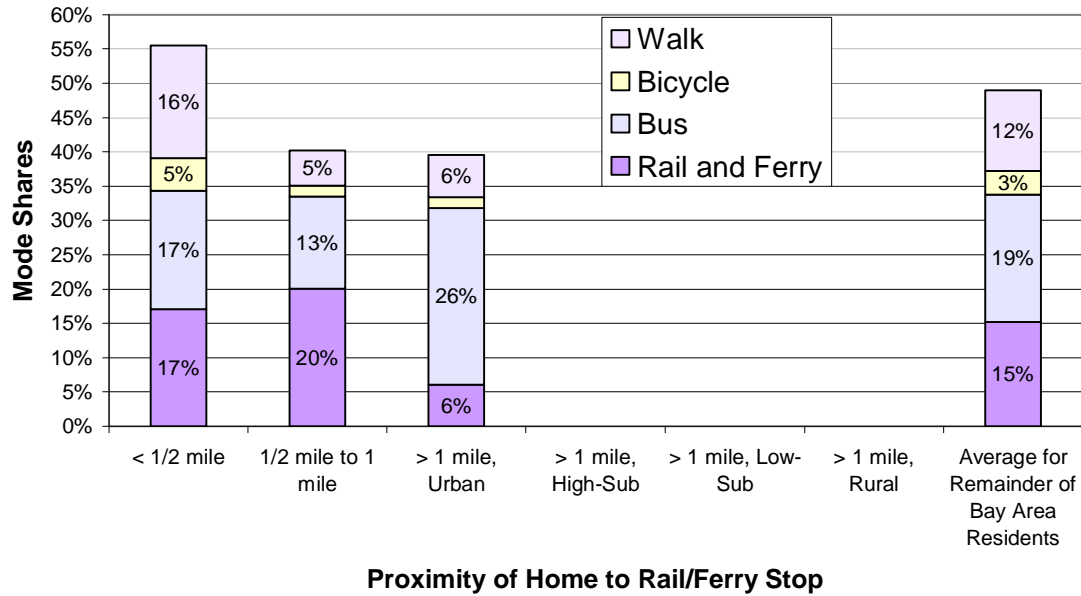
Comparing Table 3 results to Figure 6, transit and non-motorized shares for the ½-mile group are more weighted towards San Francisco residents' results than results for the remainder of Bay Area residents (more than 60% of ½-mile residents live in San Francisco). The remaining groups, however, are more weighted towards the results for residents living outside of San Francisco, and in fact, results for high-suburban, low-suburban, and rural residents are practically identical to results for residents outside of San Francisco since there were very few (none in the case of rural areas) low density samples in San Francisco. This holds true for non-work trips as well. The key finding in Figure 6b is that the same general trend evident in regional results is present when San Francisco residents are removed from the analysis. Namely, transit and non-motorized shares are higher and vehicle shares are lower the closer an individual lives to a rail or ferry stop, and transit, bike, and walk shares decrease as population density decreases.

#### **4.6.2 Non-Work Trips**

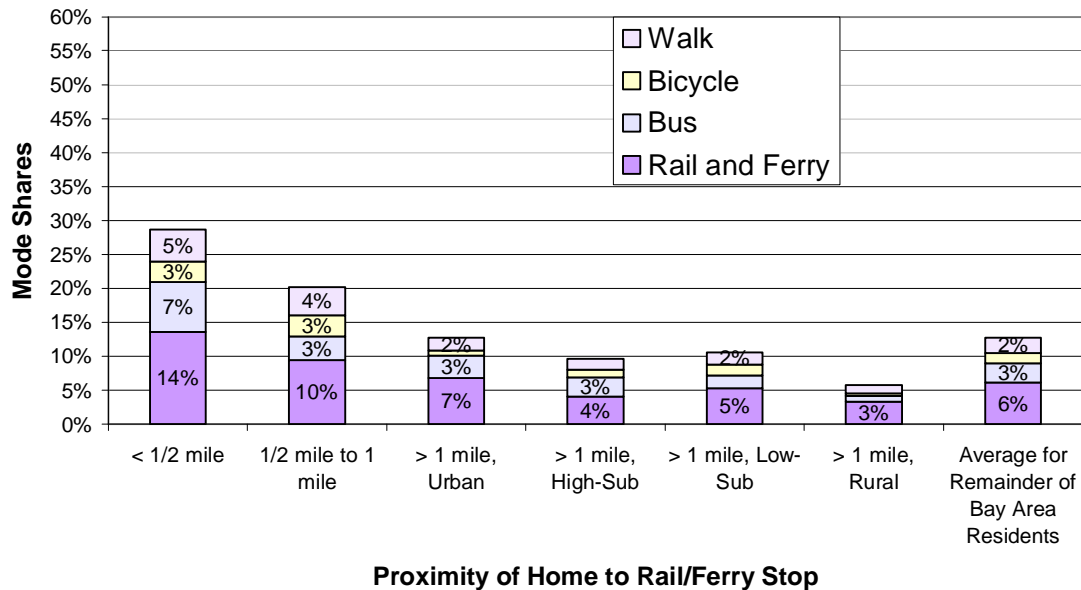
The primary difference between Figures 6a/6b and 6c/6d is that walk shares for non-work trips are significantly higher than walk shares for work trips for both San Francisco residents and individuals living outside San Francisco. Transit shares for both groups (San Francisco and the remainder of residents) are lower across the six distance/density categories for non-work trips than for work trips. However, in both cases, non-work transit shares are highest for station area residents. This is most pronounced for residents living outside of San Francisco but within ½ mile of a rail or ferry stop. The non-work transit share for this group is between four and thirteen times greater than the non-work transit share for other groups. Another important finding for work and non-work shares for the two groups is that, the rail/ferry mode competed well with or, in the case of residents living outside of San Francisco, surpassed bus mode shares for work trips. However for non-work trips, bus shares are higher than rail/ferry shares for nearly all distance/density groups, particularly in the case of ½-mile residents.

**Figure 6. Transit and Non-Motorized Shares by Proximity to Rail/Ferries for San Francisco Residents and Residents Living Outside of San Francisco**

**a) San Francisco Residents - Work Trips**

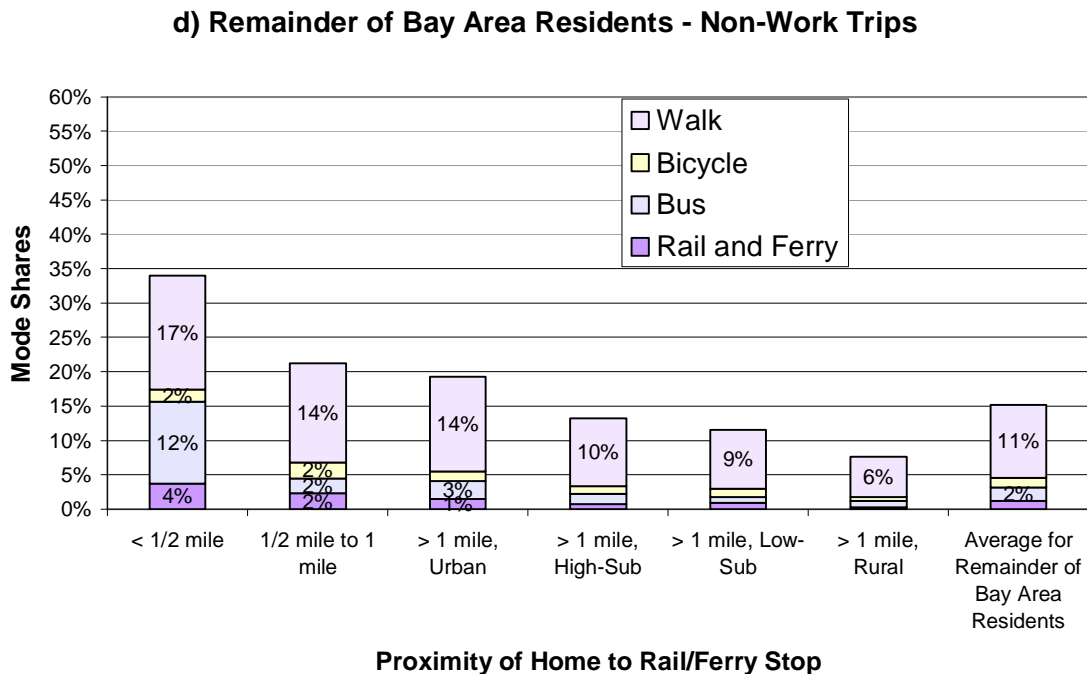
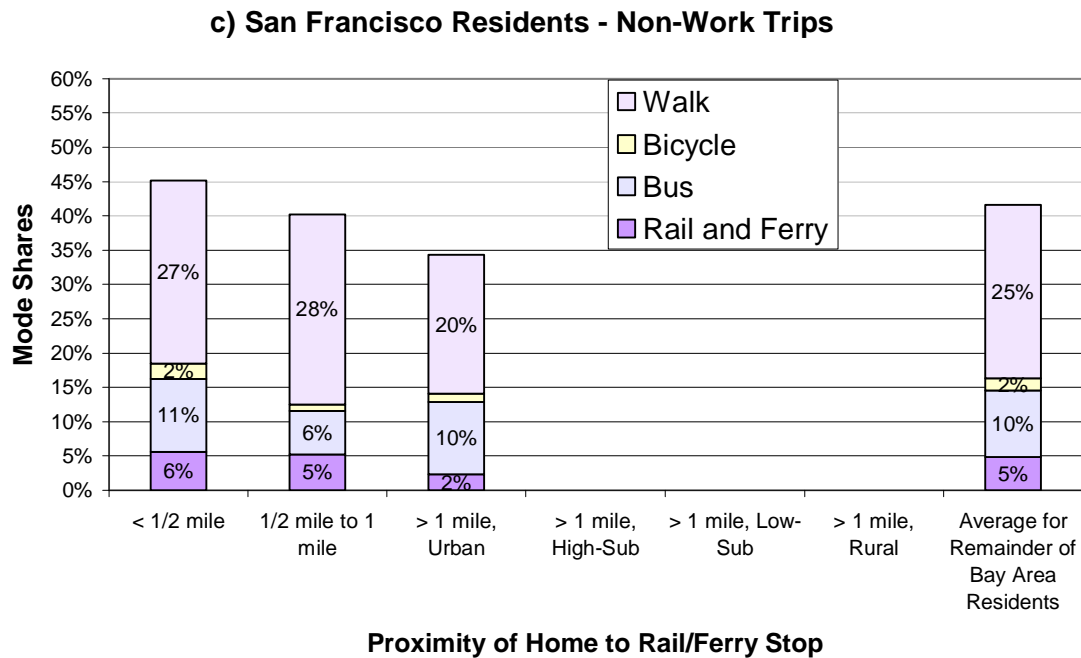


**b) Remainder of Bay Area Residents - Work Trips**





**Figure 6. Transit and Non-Motorized Shares by Proximity to Rail/Ferries for San Francisco Residents and Residents Living Outside of San Francisco (continued)**



Source: Bay Area Travel Survey 2000, see Appendices I and J

### 4.6.3 Household and Person-Level Trip Rates

Tables 10 and 11 outline per capita and household trip rates and transit use for San Francisco residents and the remainder of Bay Area residents, respectively. A comparison of household trip rates by mode for the two groups shows that residents living outside of San Francisco have higher vehicle driver trips and lower transit, bicycle, and walk trip rates than San Franciscans. However, it is interesting to note that at the per capita level, San Franciscans are making just as many total trips per day.

Results for San Francisco residents indicate that vehicle driver trip rates are lowest and transit, bike, and walk rates are highest for ½-mile residents. Rates for ½-mile to 1-mile and urban residents are statistically the same. In the case of residents living outside of San Francisco, closer proximity to rail and ferry stops also yields lower vehicle driver rates and higher transit, bike, and walk rates. The exception is for residents outside of San Francisco who live between ½ mile and 1 mile from a rail/ferry stop who tend to bike just as much as ½-mile residents.

**Table 10. Per Capita and Household Trip Rates and Transit Use by Proximity to Rail and Ferries – SAN FRANCISCO RESIDENTS**

Travel Characteristic	Proximity of Household to Rail Station or Ferry Terminal						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
<u>Vehicle Driver Trips</u>							
per Person	1.069	1.253	1.174	1.266	1.034	-	1.133
per Household	2.330	2.766	3.176	3.226	3.340	-	2.601
<u>Transit Trips</u>							
per Person	0.686	0.506	0.524	0.550	0.623	-	0.610
per Household	1.496	1.116	1.416	1.403	2.014	-	1.400
<u>Bicycle Trips</u>							
per Person	0.095	0.031	0.040	0.000	0.000	-	0.068
per Household	0.208	0.068	0.108	0.000	0.000	-	0.156
<u>Walk Trips</u>							
per Person	0.798	0.649	0.514	0.275	0.160	-	0.694
per Household	1.740	1.433	1.391	0.702	0.518	-	1.594
<u>Total Trips</u>							
per Person	3.312	2.945	3.030	2.917	2.194	-	3.160
per Household	7.220	6.501	8.196	7.435	7.090	-	7.256
TRANSIT USE <sup>1</sup>							
Transit-Using Population	39.3%	29.3%	29.9%	27.5%	31.4%	-	34.9%
Transit-Using Households	54.6%	44.8%	50.6%	70.2%	85.6%	-	51.9%

<sup>1</sup>. Percent of residents who used transit at least once during the two-day survey period. In the case of transit-using households, it is the percent of households where one or more members used transit at least once during the two-day survey period.

Note: Shaded cells denote insufficient sample size, and the dash represents cells with zero samples.

Source: Bay Area Travel Survey 2000

**Table 11. Per Capita and Household Trip Rates and Transit Use by Proximity to Rail and Ferries – RESIDENTS LIVING OUTSIDE SAN FRANCISCO**

Travel Characteristic	Proximity of Household to Rail Station or Ferry Terminal						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
<u>Vehicle Driver Trips</u>							
per Person	1.372	1.588	1.607	1.868	2.034	1.917	1.817
per Household	3.383	4.248	4.556	5.228	5.547	5.576	5.006
<u>Transit Trips</u>							
per Person	0.502	0.194	0.165	0.104	0.092	0.053	0.139
per Household	1.236	0.519	0.469	0.291	0.252	0.154	0.383
<u>Bicycle Trips</u>							
per Person	0.061	0.074	0.035	0.035	0.044	0.017	0.043
per Household	0.150	0.198	0.099	0.098	0.119	0.049	0.118
<u>Walk Trips</u>							
per Person	0.414	0.348	0.330	0.255	0.238	0.150	0.275
per Household	1.020	0.932	0.936	0.713	0.650	0.435	0.759
<u>Total Trips</u>							
per Person	2.977	2.942	2.989	3.173	3.293	3.032	3.129
per Household	7.339	7.873	8.477	8.880	8.984	8.819	8.619
TRANSIT USE <sup>1</sup>							
Transit-Using Population	25.6%	11.7%	10.7%	7.2%	6.1%	3.2%	8.7%
Transit-Using Households	38.6%	24.8%	23.9%	14.9%	13.9%	6.8%	18.2%

<sup>1</sup>. Percent of residents who used transit at least once during the two-day survey period. In the case of transit-using households, it is the percent of households where one or more members used transit at least once during the two-day survey period.

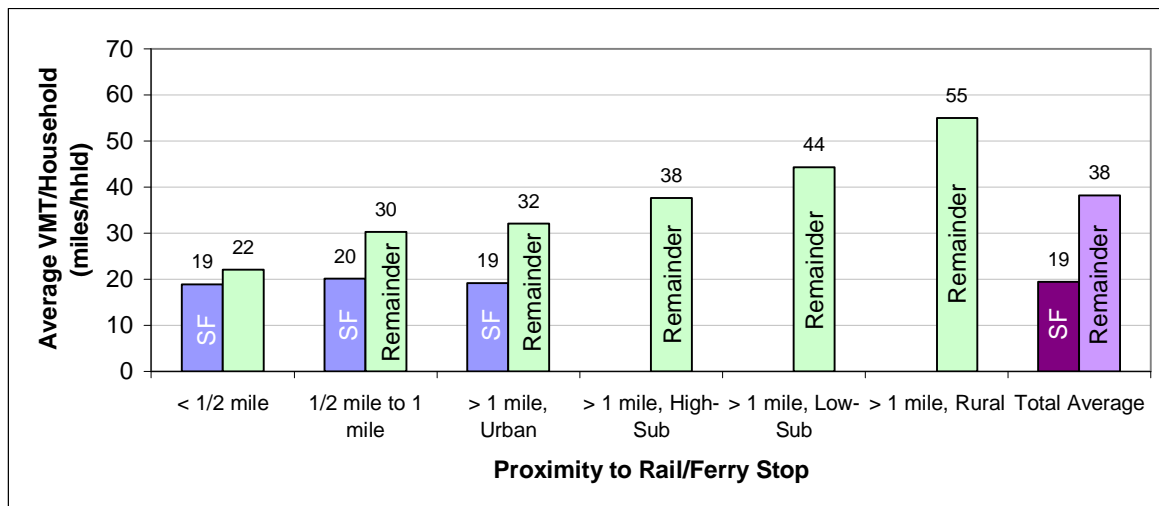
Source: Bay Area Travel Survey 2000

#### **4.6.4 Vehicle Miles Traveled**

Figures 7 and 8 provide average weekday daily VMT per household and VMT per driver by proximity to rail/ferries for San Franciscans and the remainder of Bay Area residents. Recall that VMT is based on vehicle driver trips and is summarized for all weekday, intraregional trips reported in the BATS2000 survey.

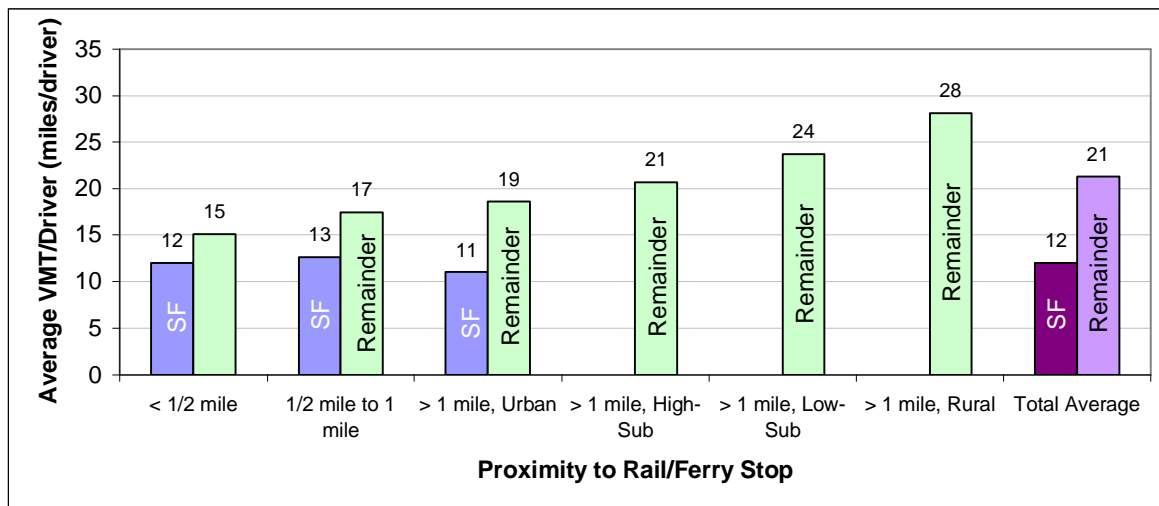
San Francisco households average about 19 vehicle miles per day, regardless of proximity to rail or ferry stops as shown in Figure 7. For the remainder of Bay Area residents, VMT per household steadily rises from 22 miles per household to 55 miles per household as distance from rail/ferry increases and density decreases. When VMT is normalized by the number of drivers in the household, the resulting per capita rates (Figure 8) still show a steady rise in VMT as distance from rail/ferry increases and as population density decreases. For San Francisco residents, a slight drop in average VMT per driver is seen for urban residents.

**Figure 7. Average VMT per Household for San Francisco and the Remainder of Residents by Proximity to Rail and Ferry Stops**



Source: Bay Area Travel Survey 2000

**Figure 8. Average VMT per Driver for San Francisco and the Remainder of Residents by Proximity to Rail and Ferry Stops**



Source: Bay Area Travel Survey 2000

#### **4.6.5 Proximity of Home and Work to Rail/Ferry Stops**

Similar to the regional analysis, San Francisco residents and the remainder of residents were analyzed with respect to both the home and work location. Table 12 shows total transit, rail/ferry, bus, and walk shares for residents based on the proximity of home and work to a rail or ferry stop as well as by county of residence and county of work (San Francisco vs. outside of San Francisco). Nearly two-thirds of San Francisco resident workers commute to jobs in San Francisco. Only 10% of residents living outside of San Francisco commute to jobs in San Francisco.

Fascinating results emerged from this analysis. The highest transit share for any group examined in this work was revealed in Table 12. Residents who live outside but work within San Francisco and who are in close proximity to a rail/ferry stop on both ends of the trip had an average transit share of 70%. The standard error on this measure was  $\pm 6.5\%$ . This is an enormous value for a transit share. It indicates the unique nature of San Francisco with its excellent transit access and very limited/expensive parking rates. Additionally, it reiterates an important benefit of having housing near a rail or ferry stop. If a worker lives near a stop that serves their work destination, they are more than likely going to utilize the rail or ferry service to commute to work.

Another key finding in Table 12 is that workers who are commuting longer distances (i.e., residents living in San Francisco but working elsewhere and residents who live elsewhere but work in San Francisco) are very likely to use transit for the work trip if the work location is near a rail/ferry stop. This result highlights the importance of locating not just homes but also jobs near rail and ferry stations.

**Table 12. Home-Based Work Trip Mode Shares by Proximity of Home and Work to Rail/Ferries by Place of Residence and Place of Work**

Proximity of Household to Rail Station or Ferry Terminal	Commute Mode	Proximity of Work to Rail Station or Ferry Terminal	
		Work Within 1/2 mile	Work Greater than 1/2 mile
San Francisco residents who work in San Francisco			
Home Within 1/2 mile	Total Transit	43%	20%
	Rail/Ferry	19%	4%
	Bus	23%	17%
	Walk	23%	13%
Home Greater than 1/2 mile	Total Transit	47%	22%
	Rail/Ferry	17%	3%
	Bus	30%	19%
	Walk	6%	14%
San Francisco residents who work outside of San Francisco			
Home Within 1/2 mile	Total Transit	49%	19%
	Rail/Ferry	35%	16%
	Bus	13%	2%
	Walk	1%	0%
Home Greater than 1/2 mile	Total Transit	36%	5%
	Rail/Ferry	36%	3%
	Bus	0%	2%
	Walk	1%	1%
Residents who live outside but work in San Francisco			
Home Within 1/2 mile	Total Transit	70%	31%
	Rail/Ferry	64%	31%
	Bus	6%	0%
	Walk	1%	0%
Home Greater than 1/2 mile	Total Transit	55%	19%
	Rail/Ferry	43%	15%
	Bus	12%	3%
	Walk	1%	2%
Residents who live outside and work outside San Francisco			
Home Within 1/2 mile	Total Transit	23%	13%
	Rail/Ferry	18%	4%
	Bus	5%	9%
	Walk	11%	4%
Home Greater than 1/2 mile	Total Transit	10%	4%
	Rail/Ferry	7%	2%
	Bus	3%	2%
	Walk	2%	2%

Note: Shaded percentages based on insufficient sample size.

Source: Bay Area Travel Survey 2000

## **4.7 County Level Results**

In addition to examining travel behavior for San Francisco County residents, the BATS2000 data set was also summarized at the county level for Alameda, Contra Costa, San Mateo, Santa Clara and the four North Bay counties. Due to the small number of rail and ferry stops in the North Bay, results for Marin, Sonoma, Napa, and Solano are reported as a combined North Bay County group. A brief summary of the county results is provided below. Detailed results can be found in Volume II, Appendices K through O. Since many of the county-level results were based on relatively small sample sizes, the reader should interpret these numbers with caution. In some cases, results are provided for informational purposes only.

### **4.7.1 Demographic Characteristics by County of Residence**

Select demographic characteristics are reported in Table 13 at the county level for the six distance/density categories. For nearly all counties, household size increases across the six groups, with the lowest household size being for the ½-mile group. Though San Francisco County has the smallest average household size of 2.3 persons per household, the ½-mile group in San Mateo County shows the smallest average household size of 1.95 persons per household. The largest households tend to be in low-density suburban and rural areas. The highest average household size is found in rural Santa Clara County (3.5 persons per household).

Vehicles per household follows the same trend for each county and increases across the six distance/density groups. Half-mile residents average the fewest vehicles per household while low-density suburban and rural residents tend to have the most vehicles. Residents within ½ mile of rail/ferry in San Francisco and Alameda Counties average the fewest vehicles per household (1.0 and 1.1, respectively).

Average household income is also reported in Table 13. Alameda and the four North Bay Counties have the lowest average household income of \$70,000. The highest average income is for San Mateo and Santa Clara Counties (about \$93,000 per household). Across the six proximity to rail/ferry and density groups, household income generally increases; however, there are several exceptions to this trend. In Contra Costa County, average household income is lowest for the urban group and second-lowest for the ½-mile to 1-mile group. In San Mateo, Santa Clara, and the North Bay Counties, ½-mile residents have the lowest average income, but urban residents have lower average incomes than ½-mile to 1-mile residents. The lowest average household income is \$47,000 for ½-mile residents in Alameda County. The highest average incomes are found in rural San Mateo and Santa Clara Counties.

**Table 13. Demographic Characteristics by County and Proximity to Rail/Ferry Stops**

Travel Characteristic and County of Residence	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
HOUSEHOLD SIZE							
Alameda	2.47	2.54	2.70	2.86	2.80	2.80	2.71
Contra Costa	2.33	2.52	2.97	2.74	2.70	3.15	2.72
San Francisco	2.18	2.21	2.70	2.55	3.23	-	2.30
San Mateo	1.95	2.72	2.79	2.82	2.82	3.10	2.74
Santa Clara	2.78	2.84	3.07	2.84	2.90	3.52	2.92
North Bay	2.16	3.06	2.34	2.68	2.60	2.72	2.63
Bay Area	2.29	2.58	2.82	2.80	2.73	2.91	2.69
VEHICLES PER HOUSEHOLD							
Alameda	1.1	1.4	1.5	1.9	2.1	2.0	1.7
Contra Costa	1.4	1.5	1.6	1.9	2.0	2.3	1.9
San Francisco	1.0	1.3	1.3	1.1	1.7	-	1.2
San Mateo	1.4	1.8	1.8	1.9	2.2	2.1	1.9
Santa Clara	1.5	2.0	1.8	1.9	2.2	2.8	2.0
North Bay	0.6	1.2	1.5	1.7	1.9	2.2	1.9
Bay Area	1.1	1.6	1.6	1.9	2.1	2.3	1.8
HOUSEHOLD INCOME							
Alameda	\$47,000	\$58,000	\$61,000	\$76,000	\$94,000	\$96,000	\$70,000
Contra Costa	\$61,000	\$56,000	\$49,000	\$69,000	\$86,000	\$93,000	\$76,000
San Francisco	\$78,000	\$78,000	\$83,000	\$53,000	\$65,000	-	\$79,000
San Mateo	\$67,000	\$90,000	\$71,000	\$92,000	\$116,000	\$128,000	\$94,000
Santa Clara	\$67,000	\$86,000	\$75,000	\$95,000	\$119,000	\$118,000	\$93,000
North Bay	\$52,000	\$66,000	\$47,000	\$57,000	\$78,000	\$72,000	\$70,000
Bay Area	\$70,000	\$74,000	\$68,000	\$79,000	\$93,000	\$87,000	\$80,000

Note: Shaded values based on insufficient sample size and are reported for informational purposes only.

Source: Bay Area Travel Survey 2000

#### **4.7.2 Travel Characteristics by County of Residence**

Mode shares by county of residence for home-based work trips are outlined in Table 14. The table shows in-vehicle shares (sum of vehicle driver and vehicle passenger trips), rail/ferry transit shares, bus transit shares, and walk shares. For all counties, in-vehicle shares increase as distance from rail/ferry increases and population density decreases. In-vehicle shares are highest for Santa Clara County and the four North Bay Counties. In Alameda County, residents within ½ mile of a rail or ferry stop use the rail or ferry mode between two and six times more often than other residents. The same trend holds for Contra Costa County residents, where individuals with ½-mile access are about two and four times more likely to use transit for the commute trip. In San Mateo County, rail/ferry shares are about 10% for residents within 1 mile of a stop while urban and suburban residents in San Mateo average about half the rail/ferry share as residents within 1 mile (5% vs. 10%). An interesting result was found for rural Santa Clara County residents. These residents actually had the highest average rail/ferry share of 11.5%. Aside from this seemingly anomalous result, rail/ferry transit shares decreased across the distance/density groups.



Bus transit shares for commute trips vary a bit more across the six distance/density groups. Unlike other counties, work trip bus shares for ½-mile Santa Clara County residents are higher than rail/ferry shares for the ½-mile group. Walk shares for the home-to-work commute are typically highest for those residents with good rail/ferry walk access, though ½-mile to 1-mile residents in each county tend to also have higher than average work-trip walk shares. Additional county-level results are provided in Volume II, Appendices K through O.

**Table 14. County-Level Work Trip Mode Shares by Proximity to Rail/Ferry Stops**

Travel Characteristic and County of Residence	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
VEHICLE DRIVER/PSGR							
Alameda	56.3%	69.4%	78.0%	86.3%	82.7%	94.5%	78.5%
Contra Costa	66.8%	72.1%	85.8%	88.4%	86.6%	92.1%	85.1%
San Francisco	42.0%	58.8%	58.6%	21.9%	66.5%	-	49.0%
San Mateo	82.6%	77.1%	86.0%	87.9%	84.1%	98.4%	84.3%
Santa Clara	78.5%	89.7%	91.2%	92.8%	95.7%	87.8%	91.4%
North Bay	50.8%	78.3%	95.6%	91.7%	90.8%	95.3%	91.6%
Bay Area	52.6%	75.1%	81.7%	89.8%	88.8%	94.0%	81.7%
RAIL/FERRY SHARES							
Alameda	23.7%	12.7%	11.1%	6.7%	11.4%	3.8%	10.9%
Contra Costa	24.7%	18.4%	10.0%	7.2%	10.5%	6.6%	10.9%
San Francisco	17.0%	20.1%	6.1%	0.0%	12.5%	-	15.2%
San Mateo	10.2%	9.9%	5.5%	4.9%	4.9%	0.8%	6.3%
Santa Clara	4.8%	3.8%	3.6%	2.4%	0.6%	11.5%	3.0%
North Bay	0.0%	18.1%	0.6%	1.4%	1.5%	0.6%	1.5%
Bay Area	15.8%	11.3%	6.7%	4.1%	5.3%	3.4%	7.3%
BUS SHARES							
Alameda	2.8%	5.6%	6.0%	3.3%	2.2%	0.0%	4.2%
Contra Costa	2.5%	4.2%	0.0%	3.3%	0.8%	0.0%	1.5%
San Francisco	17.3%	13.4%	25.7%	78.1%	21.0%	-	18.6%
San Mateo	0.3%	2.4%	4.5%	4.0%	1.7%	0.0%	2.8%
Santa Clara	12.7%	1.8%	1.2%	2.3%	0.5%	0.0%	2.2%
North Bay	41.9%	0.0%	0.0%	2.5%	3.5%	1.5%	3.0%
Bay Area	13.6%	5.2%	6.5%	3.0%	2.0%	0.8%	4.8%
WALK SHARES							
Alameda	8.1%	5.2%	2.8%	2.4%	2.4%	0.6%	3.3%
Contra Costa	6.0%	3.5%	3.4%	0.6%	1.0%	0.3%	1.5%
San Francisco	16.3%	5.2%	6.2%	0.0%	0.0%	-	11.7%
San Mateo	6.9%	6.1%	2.4%	1.6%	2.2%	0.7%	3.2%
Santa Clara	1.1%	2.4%	0.7%	0.8%	1.8%	0.0%	1.3%
North Bay	7.3%	0.0%	0.8%	2.8%	2.0%	2.1%	2.2%
Bay Area	12.0%	4.3%	2.5%	1.6%	1.8%	1.2%	3.4%

Note: Shaded values based on insufficient sample size and are reported for informational purposes only.

Source: Bay Area Travel Survey 2000

In addition to exploring differences between residents of the nine Bay Area counties, it was also interesting to look at differences between residents with access to different rail operators in the area. The next section discusses mode shares by proximity to specific rail operators in the Bay Area, namely, BART, Caltrain, MUNI light rail, and VTA light rail.

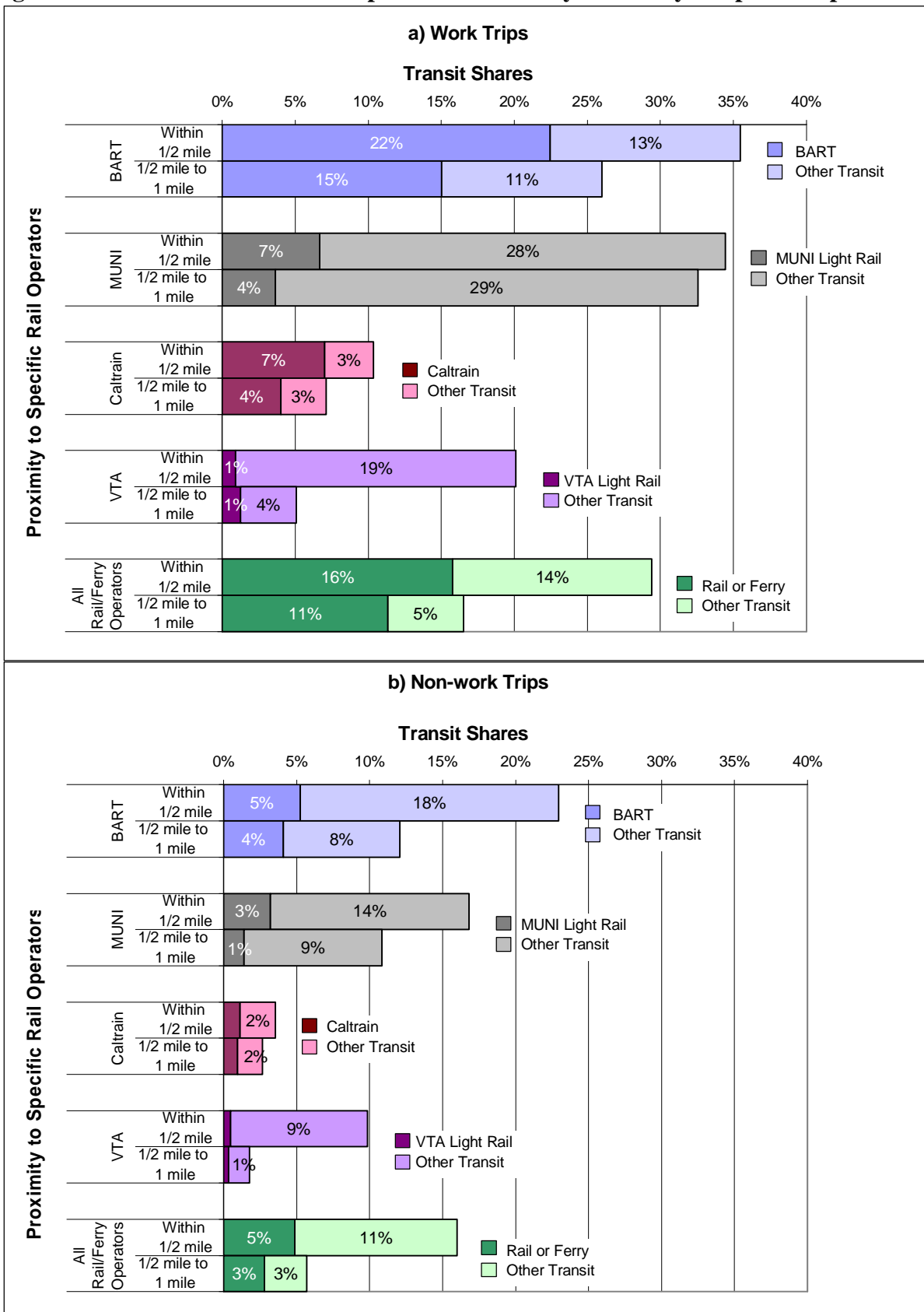
#### **4.8 Mode Shares by Proximity to Specific Rail Operators**

Mode shares by trip purpose were summarized by proximity to specific rail operators in the Bay Area. Residents were re-categorized based on their household's proximity to BART, Caltrain, MUNI light rail, and VTA light rail. Complete tables summarizing mode shares and trips by proximity to each of these four operators is provided in Appendix P. When reviewing the full tables, it is important to remember that the four categories in the greater than 1-mile group include residents from across the Bay Area. For example, since MUNI is located only in San Francisco, all households greater than 1 mile from the periphery of San Francisco County are included in the greater than 1-mile group. This is an important consideration when summarizing results. Additionally, it is important to remember that for MUNI and VTA, results are summarized by proximity to light rail service only (including cable cars but not bus lines). The focus for the operator specific tables is more on those residents who live within station areas. However, in the case of BART, it is still quite interesting to see how BART is being used by residents who live more than 1 mile from a station.

Figure 9a shows transit shares for work trips while Figure 9b shows non-work shares by proximity to the four major rail operators in the Bay Area: BART, MUNI, Caltrain, and VTA. The graph shows that individuals who live near BART and MUNI have the highest transit shares for both work and non-work trips. Residents within ½ mile of BART average a 35% work-trip transit share while residents living within ½ mile of MUNI light rail average a 34% work-trip transit share. Recall that the average work-trip transit share for all Bay Area residents was 12%. Therefore, ½-mile residents living near BART and/or MUNI light rail are roughly three times as likely to commute by transit.

Figure 9a shows that for work trips, rail is the dominant transit mode for workers living near BART and Caltrain stations while bus is the dominant transit mode for workers living near MUNI light rail and VTA light rail stops. For non-work trips, bus is the dominant transit mode for all four rail operators as shown in Figure 9b. This suggests that individuals with good access to rail stations and stops also have good access to bus service. In the case of MUNI, it is quite intuitive that bus shares would outweigh light rail shares given the ubiquity of MUNI bus service in San Francisco.

**Figure 9. Work and Non-Work Trip Transit Shares by Proximity to Specific Operators**



Source: Bay Area Travel Survey 2000

#### **4.9 Statistical Modeling**

One way to capture the impacts of all the factors that have been up to this point reviewed separately in this study is through statistical modeling. While advanced models were not developed for this study, basic linear regression models were estimated for transit, walk and bike shares. Results of the linear regression models indicate that proximity to a station area is a significant indicator of transit use and non-motorized travel even after controlling for other factors including population density and living in San Francisco. Results of the regression analysis are provided in Volume II, Appendix Q.

#### **4.10 Other Analyses**

In addition to the results and analyses summarized in the main text of this report, other parameters were also investigated during this study including:

- proximity to rail/ferry stops and high quality bus lines,
- travel behavior by age category, and
- a mixed-use analysis using jobs to population ratios.

Results for these analyses are included in Volume II, Appendix R. While the findings for these additional studies were suggestive, these areas warrant further research and development, particularly the mixed-use analysis and proximity to high quality bus lines.

## **SECTION 5: SUMMARY AND CONCLUSION**

In support of the Metropolitan Transportation Commission's (MTC's) newly adopted transit-oriented development policy, this research was undertaken to provide quantitative data from the 2000 Bay Area household travel survey to summarize the demographics of station area residents and to test whether close proximity to rail and ferry stops does indeed result in higher transit and non-motorized trips. The following subsection includes a summary of the findings from this study.

### **5.1 Summary of Results**

The demographic analysis showed that approximately 25% of the Bay Area's population live within 1 mile of a rail stop or ferry terminal, and most of these station area residents live in urban areas (nearly 70%). There are distinct demographic patterns based on proximity to rail and ferries. Namely, individuals who live in close proximity to rail and ferry stations tend to live in one or two person households without children, are much more likely to own fewer vehicles (zero or one), and tend to be more ethnically diverse than their suburban and rural counterparts. Additionally, the highest concentrations of low-income households are within 1 mile of transit although nearly half of all station area residents are in the high-income group.

In terms of regional travel characteristics, individuals with ½-mile access are about four times as likely to use transit, twice as likely to walk, and three times as likely to bike than residents living more than ½ mile from a rail or ferry stop. When the data were further disaggregated by the six distance/density groups and by trip purpose, differences in mode shares are even more pronounced.

For work trips, ½-mile residents are between four and seven times as likely as suburban and rural residents to commute to work by transit. Commute trip walk shares for ½-mile residents are more than six times higher than the walk shares for suburban and rural residents, which hover around 1.5%. Transit and walk shares for ½-mile to 1-mile residents and urban residents are also significantly higher (one and a half to four times higher) than suburban and rural residents.

For non-work trips, ½-mile residents are between three and thirteen times more likely than other residents to use transit for non-work trips. Interestingly, while rail/ferry shares comprised the majority of transit shares for work trips, bus shares make up the majority (upwards of 70%) of transit shares for non-work trips. These results imply that residents who have good rail/ferry station area access also have good access to bus service. Additionally, it suggests that the home-to-work trip is better served by rail/ferry service than non-work trip locations.

When results are normalized by the number of households and residents in each distance/density category, findings show that station area households average the fewest total trips per household. However, total trips per capita for ½-mile residents are on par with rates for residents of high-density suburban areas and rural areas. When broken down by mode, per capita transit trip rates for ½-mile residents are between two and a half and eleven times higher than other residents. Bicycle trip rates for ½-mile residents are almost twice the regional average and are between two and five times higher than residents living more than 1 mile from a rail or ferry stop. The same trend holds for walk trip rates.

An important impact of these increased transit and non-motorized shares is the associated decrease in vehicle driver trips for station area residents. Households within ½-mile of a station produce between 47% and 60% fewer vehicle miles than their suburban and rural counterparts, which means that emissions per capita is much lower for the ½-mile group.

Based on the likelihood to use transit at least once, ½-mile residents are nearly three times as likely to use transit than the average regional resident on any given day. The difference is most pronounced between ½-mile residents and rural residents, where station area residents are roughly eleven times more likely than rural residents to use transit at least once. Compared to high- and low-density suburban residents, ½-mile residents are between four and five times as likely to use transit.

When station area residents (those within ½ mile of rail/ferry) are parsed by population density, results show that urban ½-mile residents have the highest transit and non-motorized shares while lower density station area residents have lower transit and non-motorized shares. However, even after stratifying station area residents by density, their transit and non-motorized shares are still higher than residents more than 1 mile from a rail/ferry stop.

This analysis also showed that work trip mode shares are significantly impacted by proximity of both the home and work end of the trip to rail/ferry transit. Workers with good rail/ferry access on both ends of the commute trip have average commute trip transit shares of 42%. This is three and a half times the regional transit commute share of 12% and more than ten times the commute trip transit share for workers without good rail/ferry access at the home or work end. The average in-vehicle share (vehicle driver or vehicle passenger trips) for workers who live and work within ½ mile of rail/ferry transit is less than half the regional average (34% vs. 81%). Additionally, bicycle and walk shares are highest for workers who live and work near rail/ferry stops.

This study also found that San Francisco home and work locations make quite a difference on mode shares. Based on county of residence alone, San Franciscans have higher transit and non-motorized shares than the remainder of Bay Area residents. Interestingly, when work locations were considered, the highest commute trip transit share of 70% was found for workers who live outside of but work within San Francisco and who have ½-mile rail/ferry walk access on both ends of the trip.

Additionally, workers who are commuting longer distances (i.e., residents living in San Francisco but working elsewhere and residents who live elsewhere but work in San Francisco) are more likely to commute by transit if the work location is near a rail/ferry stop. These results highlight the importance of locating not only homes but also jobs near rail and ferry stations.

Results for the other eight Bay Area counties were also reviewed. Although usage levels vary by county, the findings suggest that for all counties, in-vehicle shares increase and transit and non-motorized shares decrease as distance from rail/ferry stops increases and density decreases. In addition to determining county-specific results, the study also examined mode shares by proximity to specific operators.

Individuals who live near BART and MUNI have the highest transit shares for both work and non-work trips. Compared to the regional average work-trip transit share of 12%, ½-mile residents living near BART or MUNI light rail are roughly three times as likely to use transit. Rail is the dominant commute trip transit mode for workers living near BART and Caltrain stations while bus is the dominant transit mode for workers living near MUNI light rail and VTA light rail stops. For non-work trips, bus is the dominant transit mode for all four rail operators. This suggests that individuals with good access to rail stations and stops also have good access to bus service.

## **5.2 Conclusion**

This research adds to the host of research that has looked quantitatively at the travel characteristics of TOD residents by summarizing travel and demographic characteristics of rail/ferry station area residents using data from a regional household travel survey. The results presented in this work support MTC's newly adopted TOD policy and indicate that there is a correlation between transit and non-motorized trips and proximity to rail and ferries. This effort cannot say whether results stem only from a traveler's proximity to transit, but it clearly shows definite trends in transit and non-motorized use. As noted earlier, residential self-selection near transit plays a key role in determining transit use, but in this study of the BATS2000 data, it was not possible to directly account for this phenomenon. Other areas that provide opportunities for future study related to this work include:

- Exploring mode of access and average walk distance to access transit<sup>4</sup>;
- Analyzing door to door VMT estimates (as opposed to zone to zone estimates);
- Further studying the different levels of mixed-use density near rail and ferry stops;
- Comparing travel characteristics using chained trips (tours);
- Performing more advanced statistical modeling;
- Parsing households by their discrete distance from rail and ferry stops;
- Performing or further researching attitudinal studies;
- Assessing the impact of parking on transit and non-motorized shares; and
- Conducting a similar study using proximity to bus stops in the region.

The Bay Area thrives on diversity, and while some Bay Area residents have affection for their cars, others clearly have a passion, or at least a preference, to conduct much of their lives by transit, walking and biking. Whether TOD simply allows people who prefer to drive less that personal choice, or whether it creates a greater interest in such travel options, the evidence is clear that those living and working close to transit use transit, walk and bike much more and produce less vehicle miles of travel and vehicle-based pollution.

MTC has a number of goals in pursuing a TOD policy, including insuring cost-effective transit, addressing the housing shortage, creating better communities, and preserving open space. By evaluating travel choices in existing rail and ferry oriented parts of the region, this research has

---

<sup>4</sup> Mode of access and average walk distances were explored in this study. However, results are not reported since issues with the trip linking process used to determine mode of access to transit were discovered that warrant further investigation.



demonstrated that policies to support transit-oriented development hold promise as one important tool, among others, in addressing congestion, transit usage, non-motorized travel, and air pollution in the Bay Area.

## **ACKNOWLEDGEMENTS**

The author would like to thank MTC staff, including James Corless, Doug Kimsey, Valerie Knepper, Chuck Purvis, Kearey Smith, Garlynn Woodsong, and Stella Wotherspoon, for valuable input and contributions to this research.

## **REFERENCES**

1. Parker, T., M. McKeever, G. B. Arrington, J. Smith-Heimer et al. *Statewide Transit-Oriented Development Study – Factors for Success in California*. California Department of Transportation, 2002.
2. Cervero, R. et al. *Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects*. TCRP Report 102. Transportation Research Board, Washington, D.C., 2004.
3. Metropolitan Transportation Commission. *MTC Resolution 3434 TOD Policy for Regional Transit Expansion Projects*. Metropolitan Transportation Commission, Oakland, CA, 2005. [www.mtc.ca.gov/planning/smart\\_growth/tod/index.htm](http://www.mtc.ca.gov/planning/smart_growth/tod/index.htm). Accessed July 2005.
4. Center for Transit-Oriented Development. *Hidden in Plain Sight – Capturing the Demand for Housing Near Transit*. Center for Transit-Oriented Development, Oakland, California, September 2004.
5. Renne, J. L. and J. S. Wells. Emerging European-Style Planning in the USA: Transit-Oriented Development. *World Transport Policy and Practice*, Vol. 10, No. 2, 2004. [www.eco-logica.co.uk/wtpp10.2.pdf](http://www.eco-logica.co.uk/wtpp10.2.pdf). Accessed July 15, 2005.
6. Cervero, R. and R. Gorham. Commuting in Transit Versus Automobile Neighborhoods. *Journal of the American planning Association*, Vol. 61, No. 2, 1995, pp. 210-225.
7. Cervero, R. and M. Duncan. *Residential Self Selection and Rail Commuting: A Nested Logit Analysis*. Working Paper, University of California Transportation Center, Berkeley, California, December 2002. [www.uctc.net/papers/604.pdf](http://www.uctc.net/papers/604.pdf). Accessed July 25, 2005.
8. Cervero, R. and M. Duncan. Benefits of Proximity to Rail on Housing Markets: Experiences in Santa Clara County. *Journal of Public Transportation*, Vol. 5, No. 1, 2002, pp. 1-17.
9. Kitamura, R., P. L. Mokhtarian, and L. Laidet. A Micro-Analysis of Land Use and Travel in Five Neighborhoods in the San Francisco Bay Area. *Transportation*, Vol. 24, 1997, pp. 125-158.
10. Cervero, R. Walk-and-Ride: Factors Influencing Pedestrian Access to Transit. *Journal of Public Transportation*, Vol. 3, No. 4, 2001, pp. 1-23.
11. Metropolitan Transportation Commission. *Statistical Summary of Bay Area Transit Operators – Fiscal Years 1998-99 through 2002-03*. Metropolitan Transportation Commission, Oakland, California, December 2004.

---

## **APPENDIX A**

---

### **BATS2000 DATA AND BAY AREA RAIL AND FERRY STOPS**

---

Bay Area Travel Survey 2000 (BATS2000).....	A-1
Table A1. List of Rail/Ferry Stations and Light Rail Lines Used in BATS2000 Station Area Residents Study.....	A-2
Figure A1. Bay Area Rail and Ferry Stops Used in BATS2000 Station Area Residents Study.....	A-4



### **Bay Area Travel Survey 2000 (BATS2000)**

In 2000, the Metropolitan Transportation Commission (MTC) launched its fifth travel survey effort in the nine-county Bay Area: the Bay Area Travel Survey 2000, or BATS2000. BATS2000 is an activity-based travel survey that collected information on all in-home and out-of-home activities over a two-day period, including weekday and weekend pursuits. Just over 15,000 Bay Area households participated, and information was collected for more than 34,000 residents.

BATS2000 data were weighted and expanded based on Census 2000 data to reflect the nearly 2.4 million households and 6.5 million residents of the Bay Area. The final weighting and expansion process was based on PUMA (Public Use Microdata Area) of residence, household size, vehicles available, tenure, and race/ethnicity. The results herein are based on the distribution of weighted and expanded households, residents, and weekday intraregional trips (trips that begin and end within the 9-county Bay Area). The survey collected precise activity locations (including home and work locations), for 90% of trips (about 10% of trips had missing origin and/or destination information). The precise household and work locations were used to categorize residents based on their home and work place's proximity to rail and ferry stations.

For additional information on the BATS2000 survey (including information on weighting and expansion) or to access the data files, see the MTC website at [http://www.mtc.ca.gov/maps\\_and\\_data/datamart/survey/](http://www.mtc.ca.gov/maps_and_data/datamart/survey/).

**Table A1. List of Rail/Ferry Stations and Light Rail Lines Used in BATS2000 Station Area Residents Study**

**BART Stations**

12TH STREET  
 16TH STREET & MISSION  
 19TH STREET  
 24TH STREET & MISSION  
 ASHBY  
 BALBOA PARK  
 BAYFAIR  
 BERKELEY  
 CASTRO VALLEY  
 CIVIC CENTER  
 COLISEUM  
 COLMA  
 CONCORD  
 DALY CITY  
 EAST DUBLIN/PLEASANTON  
 EL CERRITO DEL NORTE  
 EL CERRITO PLAZA  
 EMBARCADERO  
 FREMONT  
 FRUITVALE  
 GLEN PARK  
 HAYWARD  
 LAFAYETTE  
 LAKE MERRITT  
 MACARTHUR  
 MONTGOMERY  
 NORTH BERKELEY  
 NORTH CONCORD/MARTINEZ  
 ORINDA  
 PITTSBURG/BAY POINT  
 PLEASANT HILL  
 POWELL  
 RICHMOND  
 ROCKRIDGE  
 SAN LEANDRO  
 SOUTH HAYWARD  
 UNION CITY  
 WALNUT CREEK  
 WEST OAKLAND

**Caltrain Stations**

22ND STREET STATION  
 ATHERTON STATION  
 BAYSHORE STATION  
 BELMONT STATION  
 BLOSSOM HILL STATION  
 BROADWAY STATION  
 BURLINGAME STATION  
 CALIFORNIA AVENUE STATION  
 CAPITOL STATION  
 COLLEGE PARK STATION  
 GILROY STATION  
 HAYWARD PARK STATION  
 HILLSDALE STATION  
 LAWRENCE STATION  
 MENLO PARK STATION  
 MILLBRAE STATION  
 MORGAN HILL STATION  
 MOUNTAIN VIEW STATION  
 PALO ALTO STATION  
 PAUL AVENUE STATION  
 REDWOOD CITY STATION  
 S SAN FRANCISCO STATION  
 SAN ANTONIO STATION  
 SAN BRUNO STATION  
 SAN CARLOS STATION  
 SAN JOSE STATION  
 SAN MARTIN STATION  
 SAN MATEO STATION  
 SANTA CLARA STATION  
 STANFORD STADIUM  
 SUNNYVALE STATION  
 TAMIEN STATION  
 TERMINUS--4TH AND KING

**Table A1. List of Rail/Ferry Stations and Light Rail Lines Used in BATS2000 Station Area Residents Study (continued)**

**ACE Stations**

Fremont  
Great America  
Livermore  
Pleasanton  
San Jose  
Santa Clara  
Vasco

**Amtrak Stations**

Berkeley  
Centerville Station (Fremont)  
Davis  
Emeryville  
Fairfield/Suisun City  
Great America (Santa Clara)  
Hayward  
Martinez  
Oakland Jack London Square  
Richmond  
Sacramento  
San Jose

**Ferry Stations**

Alameda Gateway Ferry Terminal  
Bay Farm Island Ferry Terminal  
Golden Gate Larkspur Ferry Terminal  
Golden Gate Sausalito Ferry Terminal  
Jack London Square Ferry Terminal  
Pier 39  
Pier 43 1/2  
San Francisco Ferry Building  
Tiburon Ferry Terminal  
Vallejo Ferry Terminal

**Muni Light Rail Lines**

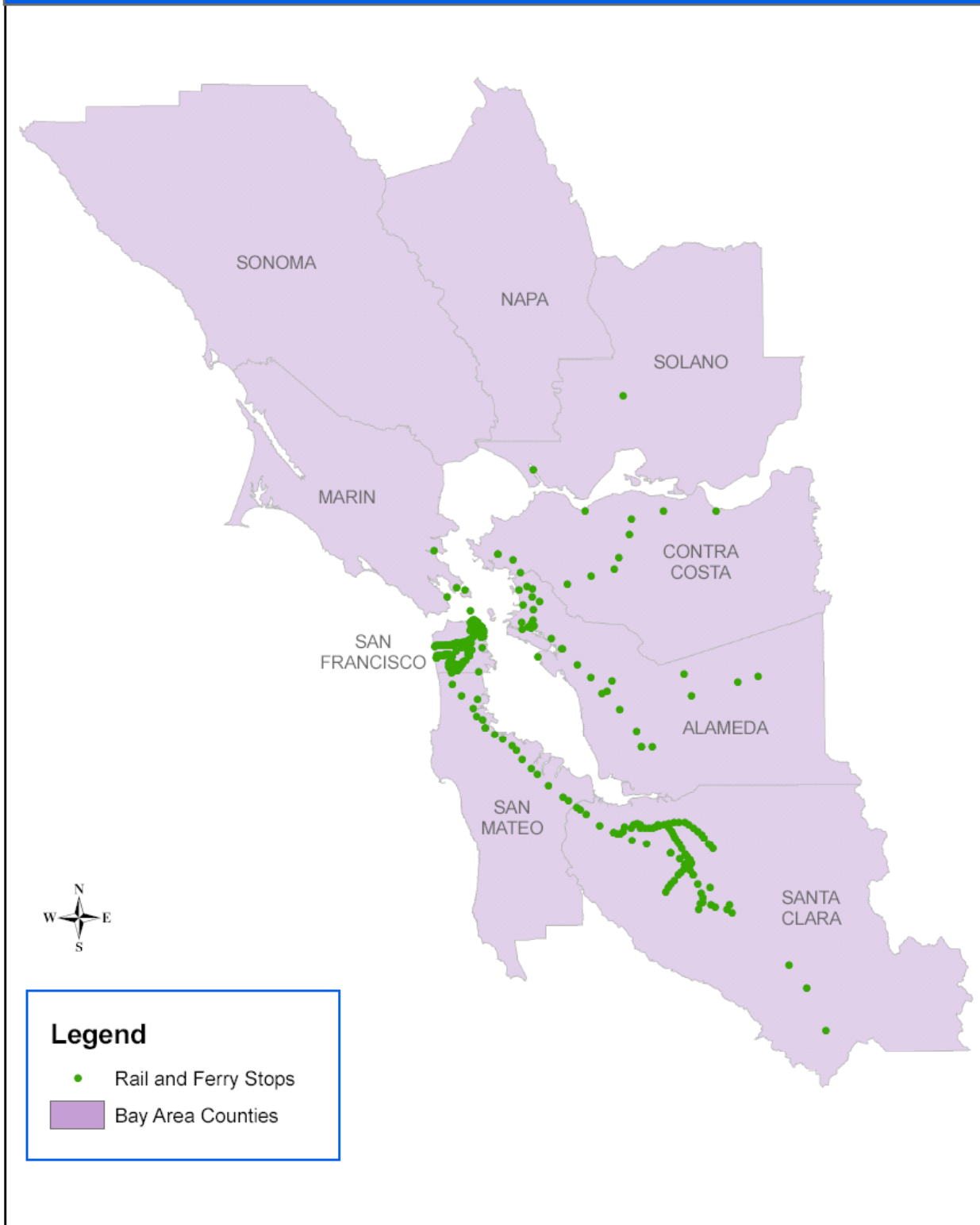
C (California Cable Car line)  
F  
J  
K  
L  
M  
N  
PH (Powell-Hyde Cable Car Line)  
PM (Powell-Mason Cable Car Line)

**VTa Stations**

Almaden  
Alum Rock  
Baypointe  
Bayshore/NASA  
Berryessa  
Blossom Hill  
Bonaventura  
Borregas  
Branham  
Capitol  
Champion  
Children's Discovery Museum  
Cisco Way  
Civic Center  
Component  
Convention Center  
Cottle  
Cropley  
Crossman  
Curtner  
Downtown Mountain View  
Evelyn  
Fair Oaks  
Gay  
Gish  
Great America  
Great Mall/Main  
Hostetter  
I-880/Milpitas  
Japantown/Ayer  
Karina  
Lick Mill  
Lockheed Martin  
McKee  
Metro/Airport  
Middlefield  
Moffett Park  
Montague  
Oakridge  
Ohlone/Chynoweth  
Old Ironsides  
Orchard  
Paseo de San Antonio  
Penitencia Creek  
Reamwood  
River Oaks  
Saint James  
Santa Clara  
Santa Teresa  
Snell  
Tamien  
Tasman  
Vienna  
Virginia  
Whisman



Figure A1. Bay Area Rail and Ferry Stops Used in BATS2000 Station Area Residents Study



---

## APPENDIX B

---

### CIRCULAR VS. WALKABLE BUFFER RESULTS

---

Circular and Walkable Buffer Analyses.....	B-1
Differences between the Circular and Walkable Buffer Methods.....	B-1
Table B1. Sample Households and Persons: Circular and Walkable Analysis Results.....	B-2
Table B2. Sample Households and Persons, San Francisco and Remainder of Bay Area Residents: Circular and Walkable Analysis Results .....	B-3
Table B3. Trip Characteristics: Circular and Walkable Analysis Results.....	B-4
Table B4. Rail/Ferry and Bus Shares: Circular and Walkable Analysis Results .....	B-5



### **Circular and Walkable Buffer Analyses**

Similar to previous studies of TOD and station area residents, the BATS2000 station area residents analysis initially categorized households using circular buffers around each of the rail and ferry stops in the Bay Area. Circular rings at distances of ¼ mile, ½ mile and 1 mile were created around stations as shown in Figure 1 of the main text for the Downtown Berkeley BART station. Once the buffers were created, households were appended to the circular buffers in which they fell, with the smallest buffer being used to classify the household.

There are limitations to using circular polygons to define walk access around a transit stop. Namely, this method does not account for the fact that people generally walk along streets to access destinations, and it ignores major barriers like freeways. To account for this, walkable network buffers were created around each Bay Area rail and ferry stop. Walkable buffers represent a closer approximation of the true area surrounding the rail/ferry stop that is accessible along the street network.

Similar to the circular buffer method, three walkable buffers were initially created to reflect ¼-mile, ½-mile, and 1-mile access, but sample sizes did not support a ¼-mile analysis with walkable buffers. Therefore, only three distance categories were used: within ½ mile, between ½ and 1 mile, and greater than 1 mile from a rail or ferry stop.

There are also problems with creating walkable buffers. Specifically, there are many pedestrian walkways, both formal paths and informal trails, that are not likely represented in a street network. In addition to the quality of the underlying street network, there are also concerns regarding the software used to create the walkable buffers. Additional details are provided in Volume II, Appendix G on the process of creating walkable buffers, including station area maps displaying some of the problems encountered.

Despite the limitations of creating walkable network buffers, this study assumes that walkable buffers are a better reflection of station area access than circular buffers. However, true access probably lies somewhere in between. The following section offers a brief discussion of the differences resulting from categorizing households with each method.

### **Differences between the Circular and Walkable Buffer Methods**

One result of shifting from the circular to walkable buffer analysis was the loss of sample size, particularly for the ¼-mile and ½-mile group. The reduction in buffer size caused more than a 30% loss of sample in the ¼-mile and ½-mile groups and approximately a 20% data loss in the ½-mile to 1-mile category (Table B1). This data loss resulted in eliminating the ¼-mile category and consolidating these households into the ½-mile group. Based on area alone, transitioning from a circular to more diamond-shaped polygon results in a 30% area loss. Therefore, it is reasonable that there was a 30% data shift. What this means is that residents who live within the ½-mile circular buffer but who could not actually walk to the station within a distance of a ½ mile along the street were pushed into the 1-mile group (or the greater than 1-mile group, as the case may be). This hones the results for all groups onto those persons who truly have ½-mile or 1-mile walk access to a rail or ferry station. Tables B2, B3, and B4 provide additional demographic and

travel information from the circular and walkable buffer analyses. Complete results from the circular buffer analysis are provided in Volume II, Appendix H.

**Table B1. Sample Households and Persons: Circular and Walkable Analysis Results**

Proximity of Home to Rail Stations and Ferry Terminals	Number of Households		Difference	
	Circular	Walkable	Number	Percent
<i>Total - All Residents</i>				
Within 1/4 mile	926	599	-327	-35%
1/4 mile to 1/2 mile	1,202	808	-394	-33%
1/2 mile to 1 mile	2,544	1,995	-549	-22%
Greater than 1 mile - Urban	1,499	2,083	584	39%
Greater than 1 mile - High-Suburban	2,794	3,199	405	14%
Greater than 1 mile - Low-Suburban	4,969	5,235	266	5%
Greater than 1 mile - Rural	1,130	1,145	15	1%
<i>Total</i>	<i>15,064</i>	<i>15,064</i>		

Source: Bay Area Travel Survey 2000

**Table B2. Sample Households and Personss, San Francisco and Remainder of Bay Area Residents: Circular and Walkable Analysis Results**

Proximity of Home to Rail Stations and Ferry Terminals	Number of Households		Difference		Number of Persons		Difference	
	Circular	Walkable	Number	Percent	Circular	Walkable	Number	Percent
<i>San Francisco Residents</i>								
Within 1/2 mile	914	780	-134	-14.7%	1,601	1,350	-251	-15.7%
1/2 mile to 1 mile	291	329	38	13.1%	553	595	42	7.6%
Greater than 1 mile - Urban	144	234	90	62.5%	252	450	198	78.6%
<i>Subtotal</i>	<i>1,349</i>	<i>1,343</i>			<i>2,406</i>	<i>2,395</i>		
<i>Remainder of Bay Area Residents</i>								
Within 1/2 mile	1,214	627	-587	-48.4%	2,542	1,233	-1,309	-51.5%
1/2 mile to 1 mile	2,253	1,666	-587	-26.1%	4,970	3,627	-1,343	-27.0%
Greater than 1 mile - Urban	1,355	1,849	494	36.5%	2,979	4,083	1,104	37.1%
Greater than 1 mile - High-Suburban	2,794	3,195	401	14.4%	6,785	7,727	942	13.9%
Greater than 1 mile - Low-Suburban	4,965	5,229	264	5.3%	12,158	12,727	569	4.7%
Greater than 1 mile - Rural	1,130	1,145	15	1.3%	2,827	2,864	37	1.3%
<i>Subtotal</i>	<i>13,711</i>	<i>13,711</i>			<i>32,261</i>	<i>32,261</i>		
<i>Total - All Residents</i>								
Within 1/2 mile	2,128	1,407	-721	-33.9%	4,143	2,583	-1,560	-37.7%
1/2 mile to 1 mile	2,544	1,995	-549	-21.6%	5,523	4,222	-1,301	-23.6%
Greater than 1 mile - Urban	1,499	2,083	584	39.0%	3,231	4,533	1,302	40.3%
Greater than 1 mile - High-Suburban	2,794	3,199	405	14.5%	6,785	7,735	950	14.0%
Greater than 1 mile - Low-Suburban	4,969	5,235	266	5.4%	12,171	12,743	572	4.7%
Greater than 1 mile - Rural	1,130	1,145	15	1.3%	2,827	2,864	37	1.3%
<i>Total</i>	<i>15,064</i>	<i>15,064</i>			<i>34,680</i>	<i>34,680</i>		

Note: The San Francisco household and person subtotals for the circular and walkable buffers are not equivalent since the lower density San Francisco samples are not shown in this table.

Source: Bay Area Travel Survey 2000

**Table B3. Trip Characteristics: Circular and Walkable Analysis Results**

Proximity of Home to Rail Stations and Ferry Terminals	Vehicle Trips per Household		VMT per Household		Home-Based Work Trip Mode Shares				Non-Work Trip Mode Shares			
					Transit		Non-Motorized		Transit		Non-Motorized	
	Circular	Walkable	Circular	Walkable	Circular	Walkable	Circular	Walkable	Circular	Walkable	Circular	Walkable
<i>San Francisco Residents</i>												
Within 1/2 mile	2.389	2.330	19.47	18.93	35.0%	34.4%	19.3%	21.1%	15.8%	16.2%	28.2%	28.9%
1/2 mile to 1 mile	3.017	2.766	19.93	20.19	27.5%	33.5%	6.4%	6.8%	13.0%	11.6%	24.5%	28.7%
Greater than 1 mile - Urban	2.951	3.176	18.33	19.24	40.4%	31.8%	9.2%	7.8%	10.0%	12.9%	27.7%	21.5%
<i>Subtotal</i>	<i>2.601</i>	<i>2.601</i>	<i>19.50</i>	<i>19.46</i>	<i>33.8%</i>	<i>33.8%</i>	<i>15.2%</i>	<i>15.1%</i>	<i>14.5%</i>	<i>14.6%</i>	<i>25.4%</i>	<i>27.0%</i>
<i>Remainder of Bay Area Residents</i>												
Within 1/2 mile	3.797	3.383	24.77	22.09	16.3%	21.0%	7.9%	7.8%	10.1%	15.6%	18.7%	18.4%
1/2 mile to 1 mile	4.412	4.248	31.37	30.22	12.8%	12.9%	4.6%	7.2%	4.7%	4.5%	15.3%	16.7%
> 1 mile - Urban	4.686	4.556	33.13	32.03	8.9%	10.1%	2.3%	2.6%	3.4%	4.1%	14.5%	15.2%
> 1 mile - High-Suburban	5.247	5.228	38.11	37.65	6.4%	7.0%	3.0%	2.7%	2.0%	2.2%	10.6%	10.9%
> 1 mile - Low-Suburban	5.605	5.547	45.07	44.24	7.1%	7.2%	3.5%	3.4%	1.6%	1.7%	9.7%	9.8%
> 1 mile - Rural	5.604	5.576	55.43	54.98	2.8%	4.1%	1.8%	1.7%	1.2%	1.2%	5.6%	6.4%
<i>Subtotal</i>	<i>5.006</i>	<i>5.006</i>	<i>38.17</i>	<i>38.18</i>	<i>9.0%</i>	<i>9.0%</i>	<i>3.7%</i>	<i>3.7%</i>	<i>3.2%</i>	<i>3.2%</i>	<i>11.9%</i>	<i>12.0%</i>
<i>Total - All Residents</i>												
Within 1/2 mile	3.109	2.735	22.12	20.07	25.3%	29.4%	13.3%	16.1%	12.7%	16.0%	23.1%	24.8%
1/2 mile to 1 mile	4.177	3.952	29.45	28.21	15.1%	16.5%	4.9%	7.1%	6.1%	5.7%	16.8%	18.8%
> 1 mile - Urban	4.493	4.352	31.49	30.14	12.2%	13.2%	3.0%	3.3%	4.0%	5.4%	15.7%	16.1%
> 1 mile - High-Suburban	5.247	5.223	38.11	37.70	6.4%	7.1%	3.0%	2.7%	2.0%	2.2%	10.6%	10.9%
> 1 mile - Low-Suburban	5.601	5.542	45.04	44.20	7.2%	7.2%	3.5%	3.4%	1.6%	1.8%	9.7%	9.8%
> 1 mile - Rural	5.604	5.576	55.43	54.98	2.8%	4.1%	1.8%	1.7%	1.2%	1.2%	5.6%	6.4%
<i>Total</i>	<i>4.684</i>	<i>4.684</i>	<i>35.66</i>	<i>35.66</i>	<i>12.2%</i>	<i>12.2%</i>	<i>5.2%</i>	<i>5.2%</i>	<i>4.4%</i>	<i>4.4%</i>	<i>13.7%</i>	<i>13.6%</i>

Note: Shaded cells denote insufficient sample size.

Source: Bay Area Travel Survey 2000

**Table B4. Rail/Ferry and Bus Shares: Circular and Walkable Analysis Results**

Proximity of Home to Rail Stations and Ferry Terminals	Home-Based Work Trip Mode Shares				Non-Work Trip Mode Shares			
	Rail/Ferry		Bus		Rail/Ferry		Bus	
	Circular	Walkable	Circular	Walkable	Circular	Walkable	Circular	Walkable
<i>San Francisco Residents</i>								
Within 1/2 mile	18.5%	17.0%	16.5%	17.3%	5.6%	5.6%	10.2%	10.6%
1/2 mile to 1 mile	10.5%	20.1%	17.0%	13.4%	4.2%	5.2%	8.8%	6.4%
Greater than 1 mile - Urban	6.2%	6.1%	34.2%	25.7%	1.2%	2.4%	8.7%	10.5%
<i>Subtotal</i>	<i>15.3%</i>	<i>15.2%</i>	<i>18.5%</i>	<i>18.6%</i>	<i>4.8%</i>	<i>4.9%</i>	<i>9.7%</i>	<i>9.7%</i>
<i>Remainder of Bay Area Residents</i>								
Within 1/2 mile	12.0%	13.6%	4.4%	7.3%	3.4%	3.7%	6.7%	12.0%
1/2 mile to 1 mile	8.3%	9.5%	4.5%	3.4%	2.0%	2.3%	2.7%	2.2%
> 1 mile - Urban	6.0%	6.8%	2.9%	3.3%	1.0%	1.4%	2.4%	2.7%
> 1 mile - High-Suburban	4.0%	4.1%	2.4%	2.9%	0.7%	0.7%	1.3%	1.5%
> 1 mile - Low-Suburban	5.3%	5.3%	1.9%	1.9%	0.7%	0.9%	0.8%	0.8%
> 1 mile - Rural	2.0%	3.4%	0.8%	0.8%	0.3%	0.2%	1.0%	0.9%
<i>Subtotal</i>	<i>6.2%</i>	<i>6.2%</i>	<i>2.8%</i>	<i>2.8%</i>	<i>1.2%</i>	<i>1.2%</i>	<i>2.0%</i>	<i>2.0%</i>
<i>Total - All Residents</i>								
Within 1/2 mile	15.0%	15.8%	10.2%	13.6%	4.4%	4.9%	8.3%	11.1%
1/2 mile to 1 mile	8.6%	11.3%	6.5%	5.2%	2.4%	2.8%	3.7%	2.9%
> 1 mile - Urban	6.0%	6.7%	6.1%	6.5%	1.0%	1.6%	3.0%	3.8%
> 1 mile - High-Suburban	4.0%	4.1%	2.4%	3.0%	0.7%	0.7%	1.3%	1.5%
> 1 mile - Low-Suburban	5.3%	5.3%	1.9%	2.0%	0.8%	1.0%	0.8%	0.8%
> 1 mile - Rural	2.0%	3.4%	0.8%	0.8%	0.3%	0.2%	1.0%	0.9%
<i>Total</i>	<i>7.3%</i>	<i>7.3%</i>	<i>4.8%</i>	<i>4.8%</i>	<i>1.6%</i>	<i>1.6%</i>	<i>2.8%</i>	<i>2.8%</i>

Note: Shaded cells denote insufficient sample size.

Source: Bay Area Travel Survey 2000



---

## APPENDIX C

### CENSUS DATA

---

Census Data Analysis .....	C-1
Table C1. Key Regional Indicator Variables by Transit Station Buffer Areas, Census 2000.....	C-2
Table C2. Key State-Level Indicator Variables by Transit Station Buffer Areas, Census 2000 (Excluding the Bay Area).....	C-3
Table C3. Key State-Level Indicator Variables by Transit Station Buffer Areas, Census 2000 (Including the Bay Area).....	C-4
Table C4. Total Population, 2000: Station Area Buffer Analysis .....	C-5
Table C5. Land Area, 2000: Station Area Buffer Analysis.....	C-6
Table C6. Total Commuters, 2000: Station Area Buffer Analysis.....	C-7
Table C7. Transit Commuters, 2000: Station Area Buffer Analysis .....	C-8
Table C8. Bicycle Commuters, 2000: Station Area Buffer Analysis.....	C-9
Table C9. Walk Commuters, 2000: Station Area Buffer Analysis .....	C-10
Table C10. Drive Alone Commuters, 2000: Station Area Buffer Analysis .....	C-11
Table C11. Carpool Commuters, 2000: Station Area Buffer Analysis.....	C-12
Table C12. At Home Workers, 2000: Station Area Buffer Analysis .....	C-13
Table C13. Total Households, 2000: Station Area Buffer Analysis.....	C-14
Table C14. Households with Zero Vehicles, 2000: Station Area Buffer Analysis.....	C-15
Table C15. Vehicles in Households, 2000: Station Area Buffer Analysis.....	C-16
Table C16. Mean Household Income, 2000: Station Area Buffer Analysis .....	C-17
Table C17. Low Income Households (< \$30,000), 2000: Station Area Buffer Analysis.....	C-18
Table C18. Minority Population, 2000: Station Area Buffer Analysis.....	C-19
Table C19. Household Population, 2000: Station Area Buffer Analysis.....	C-20



### **Census Data Analysis**

Census 2000 data was used to characterize station area residents similar to the BATS2000 study. Results from the Census 2000 analysis are included in this section and are reported for the Bay Area, the remainder of California, and the entire state of California.

Similar to the BATS2000 analysis, walkable network buffers were created around all rail/ferry stations in California. Census block groups were then joined with the station area buffers. Data for each block group was apportioned to one of the six distance/density categories based on the area of the block group falling within each station area buffer. Demographic and travel characteristics were then summarized for each distance/density group.

Table C1 reports Census 2000 results for the six distance/density groups for the Bay Area. The results follow a similar trend to the BATS2000 station area residents study: transit and non-motorized shares tend to decrease as distance from a rail/ferry stop increases and density decreases.

Data for the remainder of California is provided in Table C2 (Table C3 provides aggregate results for the entire state). While trends for the remainder of California are not as pronounced as for the Bay Area, the findings indicate that station area residents use transit and non-motorized modes more often than residents who are not in close proximity of a station.

Tables C4 through C19 provide additional detailed results from the Census 2000 analysis for the nine Bay Area counties.

**Table C1. Key Regional Indicator Variables by Transit Station Buffer Areas, Census 2000***(Data is for Entire Nine-County Bay Area)*

Indicator Variable	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Land (Square Miles)	59.4	120.6	91.0	181.2	614.1	5,856.1	6,922.4
% of Land Area	0.9%	1.7%	1.3%	2.6%	8.9%	84.6%	100.0%
Total Population	698,582	978,231	1,377,154	1,400,176	1,740,452	589,165	6,783,760
% of Total Population	10.3%	14.4%	20.3%	20.6%	25.7%	8.7%	100.0%
Total Households	296,818	366,220	455,999	497,598	638,264	211,119	2,466,019
% of Total Households	12.0%	14.9%	18.5%	20.2%	25.9%	8.6%	100.0%
Total Commuters	366,835	480,676	636,014	687,706	844,956	289,864	3,306,051
% of Total Commuters	11.1%	14.5%	19.2%	20.8%	25.6%	8.8%	100.0%
Transit Commuters	92,171	68,219	69,429	33,456	43,617	10,858	317,749
% of Transit	29.0%	21.5%	21.9%	10.5%	13.7%	3.4%	100.0%
Transit Share	25.1%	14.2%	10.9%	4.9%	5.2%	3.7%	9.6%
Bicycle Commuters	7,922	8,774	6,351	6,673	5,032	1,251	36,003
% of Bicycle	22.0%	24.4%	17.6%	18.5%	14.0%	3.5%	100.0%
Bicycle Share	2.2%	1.8%	1.0%	1.0%	0.6%	0.4%	1.1%
Walk Commuters	36,340	20,985	15,910	11,263	13,638	7,927	106,063
% of Walk	34.3%	19.8%	15.0%	10.6%	12.9%	7.5%	100.0%
Walk Share	9.9%	4.4%	2.5%	1.6%	1.6%	2.7%	3.2%
Drive Alone Commuters	169,855	294,899	414,457	520,505	636,712	211,668	2,248,095
% of Drive Alone	7.6%	13.1%	18.4%	23.2%	28.3%	9.4%	100.0%
Drive Alone Share	46.3%	61.4%	65.2%	75.7%	75.4%	73.0%	68.0%
Carpool Commuters	39,001	64,385	105,634	85,706	96,008	35,767	426,500
% of Carpoolers	9.1%	15.1%	24.8%	20.1%	22.5%	8.4%	100.0%
Carpool Share	10.6%	13.4%	16.6%	12.5%	11.4%	12.3%	12.9%
At-Home Workers	14,891	16,673	15,475	23,902	42,320	19,474	132,735
% of At-Home	11.2%	12.6%	11.7%	18.0%	31.9%	14.7%	100.0%
At-Home Share	4.1%	3.5%	2.4%	3.5%	5.0%	6.7%	4.0%
Zero-Vehicle Households	84,377	49,328	49,883	27,612	30,012	6,475	247,687
% of Zero-Vehicle HHs	34.1%	19.9%	20.1%	11.1%	12.1%	2.6%	100.0%
% of Total Households	28.4%	13.5%	10.9%	5.5%	4.7%	3.1%	10.0%
Total Household Vehicles	342,844	561,346	762,874	960,717	1,256,736	453,007	4,337,525
% of HH Vehicles	7.9%	12.9%	17.6%	22.1%	29.0%	10.4%	100.0%
Average Vehicles / HH	1.16	1.53	1.67	1.93	1.97	2.15	1.76
Mean Household Income	\$70,593	\$73,925	\$68,303	\$82,058	\$100,797	\$107,187	\$83,934

**Table C2. Key State-Level Indicator Variables by Transit Station Buffer Areas, Census 2000 (Excluding the Bay Area)**

*(Data is for California, Excluding Nine-County Bay Area)*

Indicator Variable	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Land (Square Miles)	63.3	164.1	467.5	793.2	2,915.5	144,633.2	149,036.8
% of Land Area	0.0%	0.1%	0.3%	0.5%	2.0%	97.0%	100.0%
Total Population	578,842	1,420,288	7,270,474	6,092,660	8,143,094	3,582,530	27,087,888
% of Total Population	2.1%	5.2%	26.8%	22.5%	30.1%	13.2%	100.0%
Total Households	197,408	454,490	2,289,866	2,054,071	2,833,595	1,214,731	9,044,162
% of Total Households	2.2%	5.0%	25.3%	22.7%	31.3%	13.4%	100.0%
Total Commuters	217,629	536,861	2,865,303	2,631,479	3,511,731	1,456,267	11,219,271
% of Total Commuters	1.9%	4.8%	25.5%	23.5%	31.3%	13.0%	100.0%
Transit Commuters	33,467	58,743	185,476	63,430	55,593	11,689	408,398
% of Transit	8.2%	14.4%	45.4%	15.5%	13.6%	2.9%	100.0%
Transit Share	15.4%	10.9%	6.5%	2.4%	1.6%	0.8%	3.6%
Bicycle Commuters	2,371	5,468	29,716	19,626	21,350	6,034	84,564
% of Bicycle	2.8%	6.5%	35.1%	23.2%	25.2%	7.1%	100.0%
Bicycle Share	1.1%	1.0%	1.0%	0.7%	0.6%	0.4%	0.8%
Walk Commuters	15,254	24,916	90,997	52,333	71,370	53,647	308,518
% of Walk	4.9%	8.1%	29.5%	17.0%	23.1%	17.4%	100.0%
Walk Share	7.0%	4.6%	3.2%	2.0%	2.0%	3.7%	2.7%
Drive Alone Commuters	120,929	332,504	1,938,272	1,999,297	2,717,059	1,076,307	8,184,367
% of Drive Alone	1.5%	4.1%	23.7%	24.4%	33.2%	13.2%	100.0%
Drive Alone Share	55.6%	61.9%	67.6%	76.0%	77.4%	73.9%	72.9%
Carpool Commuters	35,028	91,921	507,184	384,131	460,762	207,788	1,686,813
% of Carpoolers	2.1%	5.4%	30.1%	22.8%	27.3%	12.3%	100.0%
Carpool Share	16.1%	17.1%	17.7%	14.6%	13.1%	14.3%	15.0%
At-Home Workers	6,748	15,917	76,725	88,049	151,940	84,922	424,301
% of At-Home	1.6%	3.8%	18.1%	20.8%	35.8%	20.0%	100.0%
At-Home Share	3.1%	3.0%	2.7%	3.3%	4.3%	5.8%	3.8%
Zero-Vehicle Households	56,945	88,935	302,108	157,371	175,438	55,820	836,618
% of Zero-Vehicle HHs	6.8%	10.6%	36.1%	18.8%	21.0%	6.7%	100.0%
% of Total Households	28.8%	19.6%	13.2%	7.7%	6.2%	4.6%	9.3%
Total Household Vehicles	221,716	610,973	3,437,310	3,609,252	5,188,054	2,385,426	15,452,730
% of HH Vehicles	1.4%	4.0%	22.2%	23.4%	33.6%	15.4%	100.0%
Average Vehicles / HH	1.12	1.34	1.50	1.76	1.83	1.96	1.71
Mean Household Income	\$38,536	\$43,715	\$49,058	\$60,436	\$71,862	\$66,502	\$60,632

**Table C3. Key State-Level Indicator Variables by Transit Station Buffer Areas, Census 2000 (Including the Bay Area)**

*(Data is for All of California, Including Nine-County Bay Area)*

Indicator Variable	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Land (Square Miles)	122.6	284.7	558.5	974.4	3,529.6	150,489.4	155,959.2
% of Land Area	0.1%	0.2%	0.4%	0.6%	2.3%	96.5%	100.0%
Total Population	1,277,424	2,398,519	8,647,628	7,492,835	9,883,546	4,171,695	33,871,648
% of Total Population	3.8%	7.1%	25.5%	22.1%	29.2%	12.3%	100.0%
Total Households	494,226	820,710	2,745,865	2,551,670	3,471,859	1,425,850	11,510,181
% of Total Households	4.3%	7.1%	23.9%	22.2%	30.2%	12.4%	100.0%
Total Commuters	584,465	1,017,538	3,501,317	3,319,186	4,356,686	1,746,131	14,525,322
% of Total Commuters	4.0%	7.0%	24.1%	22.9%	30.0%	12.0%	100.0%
Transit Commuters	125,637	126,962	254,905	96,886	99,209	22,547	726,147
% of Transit	17.3%	17.5%	35.1%	13.3%	13.7%	3.1%	100.0%
Transit Share	21.5%	12.5%	7.3%	2.9%	2.3%	1.3%	5.0%
Bicycle Commuters	10,293	14,242	36,067	26,298	26,381	7,285	120,567
% of Bicycle	8.5%	11.8%	29.9%	21.8%	21.9%	6.0%	100.0%
Bicycle Share	1.8%	1.4%	1.0%	0.8%	0.6%	0.4%	0.8%
Walk Commuters	51,594	45,901	106,907	63,597	85,009	61,574	414,581
% of Walk	12.4%	11.1%	25.8%	15.3%	20.5%	14.9%	100.0%
Walk Share	8.8%	4.5%	3.1%	1.9%	2.0%	3.5%	2.9%
Drive Alone Commuters	290,783	627,403	2,352,729	2,519,802	3,353,770	1,287,975	10,432,462
% of Drive Alone	2.8%	6.0%	22.6%	24.2%	32.1%	12.3%	100.0%
Drive Alone Share	49.8%	61.7%	67.2%	75.9%	77.0%	73.8%	71.8%
Carpool Commuters	74,029	156,306	612,818	469,837	556,769	243,554	2,113,313
% of Carpoolers	3.5%	7.4%	29.0%	22.2%	26.3%	11.5%	100.0%
Carpool Share	12.7%	15.4%	17.5%	14.2%	12.8%	13.9%	14.5%
At-Home Workers	21,639	32,590	92,200	111,951	194,261	104,396	557,036
% of At-Home	3.9%	5.9%	16.6%	20.1%	34.9%	18.7%	100.0%
At-Home Share	3.7%	3.2%	2.6%	3.4%	4.5%	6.0%	3.8%
Zero-Vehicle Households	141,322	138,264	351,991	184,983	205,450	62,294	1,084,305
% of Zero-Vehicle HHs	13.0%	12.8%	32.5%	17.1%	18.9%	5.7%	100.0%
% of Total Households	28.6%	16.8%	12.8%	7.2%	5.9%	4.4%	9.4%
Total Household Vehicles	564,560	1,172,320	4,200,184	4,569,968	6,444,791	2,838,433	19,790,255
% of HH Vehicles	2.9%	5.9%	21.2%	23.1%	32.6%	14.3%	100.0%
Average Vehicles / HH	1.14	1.43	1.53	1.79	1.86	1.99	1.72
Mean Household Income	\$57,789	\$57,195	\$52,254	\$64,653	\$77,182	\$72,526	\$65,624

**Table C4. Total Population, 2000: Station Area Buffer Analysis**  
**Census 2000, Summary File #3**

***Total Population, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	89,090	277,557	429,241	322,245	267,673	57,935	1,443,741
Contra Costa	26,717	85,211	92,689	186,984	434,969	122,246	948,816
Marin	1,143	5,393	18,846	21,309	160,238	40,359	247,289
Napa	0	0	8,896	26,836	47,391	41,156	124,279
San Francisco	411,172	189,344	156,985	11,379	2,995	4,858	776,733
San Mateo	54,160	151,874	168,236	135,807	151,530	45,554	707,161
Santa Clara	114,178	261,752	433,294	453,291	338,988	81,082	1,682,585
Solano	2,121	7,100	43,136	130,954	151,270	59,962	394,542
Sonoma	0	0	25,832	111,371	185,398	136,013	458,614
Bay Area	698,582	978,231	1,377,154	1,400,176	1,740,452	589,165	6,783,760

***Share of Total Population, by County, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	6.2%	19.2%	29.7%	22.3%	18.5%	4.0%	100.0%
Contra Costa	2.8%	9.0%	9.8%	19.7%	45.8%	12.9%	100.0%
Marin	0.5%	2.2%	7.6%	8.6%	64.8%	16.3%	100.0%
Napa	0.0%	0.0%	7.2%	21.6%	38.1%	33.1%	100.0%
San Francisco	52.9%	24.4%	20.2%	1.5%	0.4%	0.6%	100.0%
San Mateo	7.7%	21.5%	23.8%	19.2%	21.4%	6.4%	100.0%
Santa Clara	6.8%	15.6%	25.8%	26.9%	20.1%	4.8%	100.0%
Solano	0.5%	1.8%	10.9%	33.2%	38.3%	15.2%	100.0%
Sonoma	0.0%	0.0%	5.6%	24.3%	40.4%	29.7%	100.0%
Bay Area	10.3%	14.4%	20.3%	20.6%	25.7%	8.7%	100.0%

**Table C5. Land Area, 2000: Station Area Buffer Analysis  
Census 2000, Summary File #3**

***Land Area (Square Miles)***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	9.7	30.9	28.1	41.3	92.0	535.5	737.6
Contra Costa	4.1	13.6	6.9	25.5	152.3	517.5	719.9
Marin	0.3	1.3	0.6	3.1	63.5	451.0	519.8
Napa	0.0	0.0	0.8	3.3	17.7	732.0	753.7
San Francisco	18.0	11.8	6.9	1.3	1.8	6.9	46.5
San Mateo	6.5	20.2	11.3	16.9	54.3	339.9	449.1
Santa Clara	20.3	41.7	30.5	58.4	107.4	1,032.4	1,290.7
Solano	0.4	1.1	3.7	17.0	56.1	750.8	829.2
Sonoma	0.0	0.0	2.2	14.4	69.3	1,490.1	1,575.9
Bay Area	59.4	120.6	91.0	181.2	614.1	5,856.1	6,922.4

***Share of Land Area, by County, Year 2000***

Proximity to Rail Stations and Ferry Terminals							
County	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	Total
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	1.3%	4.2%	3.8%	5.6%	12.5%	72.6%	100.0%
Contra Costa	0.6%	1.9%	1.0%	3.5%	21.2%	71.9%	100.0%
Marin	0.1%	0.2%	0.1%	0.6%	12.2%	86.8%	100.0%
Napa	0.0%	0.0%	0.1%	0.4%	2.3%	97.1%	100.0%
San Francisco	38.7%	25.3%	14.8%	2.7%	3.8%	14.8%	100.0%
San Mateo	1.4%	4.5%	2.5%	3.8%	12.1%	75.7%	100.0%
Santa Clara	1.6%	3.2%	2.4%	4.5%	8.3%	80.0%	100.0%
Solano	0.0%	0.1%	0.5%	2.1%	6.8%	90.6%	100.0%
Sonoma	0.0%	0.0%	0.1%	0.9%	4.4%	94.6%	100.0%
Bay Area	0.9%	1.7%	1.3%	2.6%	8.9%	84.6%	100.0%



**Table C6. Total Commuters, 2000: Station Area Buffer Analysis**  
**Census 2000, Summary File #3**

***Total Commuters, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	41,272	128,641	188,897	157,111	133,512	29,477	678,910
Contra Costa	12,032	38,629	37,248	87,949	208,546	57,604	442,008
Marin	672	3,180	6,082	12,264	82,979	21,469	126,646
Napa	0	0	3,934	12,556	21,615	19,288	57,393
San Francisco	228,531	99,850	81,322	4,217	1,679	2,953	418,553
San Mateo	26,932	75,844	81,358	69,767	76,705	23,490	354,096
Santa Clara	56,681	131,758	206,821	230,574	162,744	40,349	828,927
Solano	715	2,776	18,928	56,652	67,631	27,869	174,571
Sonoma	0	0	11,422	56,617	89,544	67,364	224,947
Bay Area	366,835	480,676	636,014	687,706	844,956	289,864	3,306,051

***Share of Total Commuters by County, Year 2000***

Proximity to Rail Stations and Ferry Terminals							
County	Within 1/2 Mile	1/2 to 1 mile	Greater than One Mile				
			Urban	High	Low	Rural	
				Density Suburbs	Density Suburbs		
Alameda	6.1%	18.9%	27.8%	23.1%	19.7%	4.3%	100.0%
Contra Costa	2.7%	8.7%	8.4%	19.9%	47.2%	13.0%	100.0%
Marin	0.5%	2.5%	4.8%	9.7%	65.5%	17.0%	100.0%
Napa	0.0%	0.0%	6.9%	21.9%	37.7%	33.6%	100.0%
San Francisco	54.6%	23.9%	19.4%	1.0%	0.4%	0.7%	100.0%
San Mateo	7.6%	21.4%	23.0%	19.7%	21.7%	6.6%	100.0%
Santa Clara	6.8%	15.9%	25.0%	27.8%	19.6%	4.9%	100.0%
Solano	0.4%	1.6%	10.8%	32.5%	38.7%	16.0%	100.0%
Sonoma	0.0%	0.0%	5.1%	25.2%	39.8%	29.9%	100.0%
Bay Area	11.1%	14.5%	19.2%	20.8%	25.6%	8.8%	100.0%

**Table C7. Transit Commuters, 2000: Station Area Buffer Analysis  
Census 2000, Summary File #3**

***Transit Commuters by County of Residence, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	7,848	19,299	22,992	11,056	8,853	1,596	71,643
Contra Costa	2,675	5,858	3,563	7,448	15,593	4,121	39,258
Marin	116	548	1,137	1,357	8,444	1,127	12,729
Napa	0	0	117	196	289	172	774
San Francisco	74,737	28,333	23,370	1,138	497	685	128,760
San Mateo	3,126	7,568	7,526	3,692	3,278	626	25,817
Santa Clara	3,624	6,408	9,685	5,186	3,115	765	28,784
Solano	44	204	543	1,601	1,632	514	4,538
Sonoma	0	0	496	1,782	1,915	1,253	5,446
Bay Area	92,171	68,219	69,429	33,456	43,617	10,858	317,749

***Transit Share of Total Commuters, by County of Residence, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	19.0%	15.0%	12.2%	7.0%	6.6%	5.4%	10.6%
Contra Costa	22.2%	15.2%	9.6%	8.5%	7.5%	7.2%	8.9%
Marin	17.2%	17.2%	18.7%	11.1%	10.2%	5.2%	10.1%
Napa	n/a	n/a	3.0%	1.6%	1.3%	0.9%	1.3%
San Francisco	32.7%	28.4%	28.7%	27.0%	29.6%	23.2%	30.8%
San Mateo	11.6%	10.0%	9.3%	5.3%	4.3%	2.7%	7.3%
Santa Clara	6.4%	4.9%	4.7%	2.2%	1.9%	1.9%	3.5%
Solano	6.2%	7.4%	2.9%	2.8%	2.4%	1.8%	2.6%
Sonoma	n/a	n/a	4.3%	3.1%	2.1%	1.9%	2.4%
Bay Area	25.1%	14.2%	10.9%	4.9%	5.2%	3.7%	9.6%

**Table C8. Bicycle Commuters, 2000: Station Area Buffer Analysis  
Census 2000, Summary File #3**

***Bicycle Commuters by County of Residence, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	1,338	3,186	1,987	1,076	683	114	8,385
Contra Costa	130	424	312	484	587	147	2,085
Marin	3	9	85	137	818	181	1,233
Napa	0	0	96	192	136	55	479
San Francisco	5,352	2,044	818	21	5	62	8,302
San Mateo	302	770	785	455	412	172	2,896
Santa Clara	794	2,316	2,059	3,436	1,366	104	10,076
Solano	4	24	132	298	269	77	803
Sonoma	0	0	77	573	756	338	1,744
Bay Area	7,922	8,774	6,351	6,673	5,032	1,251	36,003

***Bicycle Share of Total Commuters, by County of Residence, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	3.2%	2.5%	1.1%	0.7%	0.5%	0.4%	1.2%
Contra Costa	1.1%	1.1%	0.8%	0.6%	0.3%	0.3%	0.5%
Marin	0.4%	0.3%	1.4%	1.1%	1.0%	0.8%	1.0%
Napa	n/a	n/a	2.4%	1.5%	0.6%	0.3%	0.8%
San Francisco	2.3%	2.0%	1.0%	0.5%	0.3%	2.1%	2.0%
San Mateo	1.1%	1.0%	1.0%	0.7%	0.5%	0.7%	0.8%
Santa Clara	1.4%	1.8%	1.0%	1.5%	0.8%	0.3%	1.2%
Solano	0.6%	0.9%	0.7%	0.5%	0.4%	0.3%	0.5%
Sonoma	n/a	n/a	0.7%	1.0%	0.8%	0.5%	0.8%
Bay Area	2.2%	1.8%	1.0%	1.0%	0.6%	0.4%	1.1%

**Table C9. Walk Commuters, 2000: Station Area Buffer Analysis**  
**Census 2000, Summary File #3**

*Walk Commuters by County of Residence, Year 2000*

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	3,666	7,783	5,274	2,522	2,205	469	21,919
Contra Costa	266	997	968	1,088	2,325	988	6,631
Marin	57	229	427	335	2,025	762	3,835
Napa	0	0	123	286	743	1,226	2,378
San Francisco	29,328	5,897	3,663	56	114	133	39,192
San Mateo	1,141	2,335	1,629	844	951	708	7,609
Santa Clara	1,864	3,672	3,039	3,724	1,851	637	14,786
Solano	19	71	474	874	1,012	334	2,784
Sonoma	0	0	313	1,534	2,412	2,670	6,929
Bay Area	36,340	20,985	15,910	11,263	13,638	7,927	106,063

*Walk Share of Total Commuters, by County of Residence, Year 2000*

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	8.9%	6.1%	2.8%	1.6%	1.7%	1.6%	3.2%
Contra Costa	2.2%	2.6%	2.6%	1.2%	1.1%	1.7%	1.5%
Marin	8.5%	7.2%	7.0%	2.7%	2.4%	3.5%	3.0%
Napa	n/a	n/a	3.1%	2.3%	3.4%	6.4%	4.1%
San Francisco	12.8%	5.9%	4.5%	1.3%	6.8%	4.5%	9.4%
San Mateo	4.2%	3.1%	2.0%	1.2%	1.2%	3.0%	2.1%
Santa Clara	3.3%	2.8%	1.5%	1.6%	1.1%	1.6%	1.8%
Solano	2.6%	2.6%	2.5%	1.5%	1.5%	1.2%	1.6%
Sonoma	n/a	n/a	2.7%	2.7%	2.7%	4.0%	3.1%
Bay Area	9.9%	4.4%	2.5%	1.6%	1.6%	2.7%	3.2%

**Table C10. Drive Alone Commuters, 2000: Station Area Buffer Analysis  
Census 2000, Summary File #3**

***Drive Alone Commuters by County of Residence, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	Total
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	21,079	73,192	119,111	115,843	98,934	22,337	450,496
Contra Costa	6,668	23,705	23,060	62,305	153,238	41,311	310,286
Marin	376	1,870	3,108	8,314	54,620	14,609	82,898
Napa	0	0	2,436	9,094	16,348	13,820	41,698
San Francisco	81,854	45,026	38,009	2,270	823	1,527	169,508
San Mateo	18,128	52,080	54,194	53,737	60,437	17,489	256,066
Santa Clara	41,292	97,271	153,706	185,427	132,437	30,981	641,113
Solano	457	1,754	13,016	40,770	50,866	21,033	127,896
Sonoma	0	0	7,819	42,745	69,009	48,561	168,134
Bay Area	169,855	294,899	414,457	520,505	636,712	211,668	2,248,095

***Drive Alone Share of Total Commuters, by County of Residence, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	Total
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	51.1%	56.9%	63.1%	73.7%	74.1%	75.8%	66.4%
Contra Costa	55.4%	61.4%	61.9%	70.8%	73.5%	71.7%	70.2%
Marin	56.0%	58.8%	51.1%	67.8%	65.8%	68.0%	65.5%
Napa	n/a	n/a	61.9%	72.4%	75.6%	71.7%	72.7%
San Francisco	35.8%	45.1%	46.7%	53.8%	49.0%	51.7%	40.5%
San Mateo	67.3%	68.7%	66.6%	77.0%	78.8%	74.5%	72.3%
Santa Clara	72.9%	73.8%	74.3%	80.4%	81.4%	76.8%	77.3%
Solano	63.9%	63.2%	68.8%	72.0%	75.2%	75.5%	73.3%
Sonoma	n/a	n/a	68.5%	75.5%	77.1%	72.1%	74.7%
Bay Area	46.3%	61.4%	65.2%	75.7%	75.4%	73.0%	68.0%

**Table C11. Carpool Commuters, 2000: Station Area Buffer Analysis  
Census 2000, Summary File #3**

***Carpool Commuters by County of Residence, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	Total
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	5,115	18,412	31,621	19,100	15,978	3,425	93,652
Contra Costa	1,636	5,690	8,063	12,923	24,164	7,294	59,769
Marin	64	215	988	1,154	8,580	2,595	13,597
Napa	0	0	976	2,241	2,959	2,343	8,519
San Francisco	21,539	12,061	10,494	528	125	404	45,152
San Mateo	3,167	10,011	14,483	7,954	7,275	2,477	45,367
Santa Clara	7,335	17,409	32,688	23,585	15,114	5,056	101,188
Solano	144	588	4,024	10,828	10,955	4,434	30,973
Sonoma	0	0	2,296	7,391	10,857	7,739	28,283
Bay Area	39,001	64,385	105,634	85,706	96,008	35,767	426,500

***Carpool Share of Total Commuters, by County of Residence, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	Total
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	12.4%	14.3%	16.7%	12.2%	12.0%	11.6%	13.8%
Contra Costa	13.6%	14.7%	21.6%	14.7%	11.6%	12.7%	13.5%
Marin	9.6%	6.8%	16.2%	9.4%	10.3%	12.1%	10.7%
Napa	n/a	n/a	24.8%	17.8%	13.7%	12.1%	14.8%
San Francisco	9.4%	12.1%	12.9%	12.5%	7.5%	13.7%	10.8%
San Mateo	11.8%	13.2%	17.8%	11.4%	9.5%	10.5%	12.8%
Santa Clara	12.9%	13.2%	15.8%	10.2%	9.3%	12.5%	12.2%
Solano	20.2%	21.2%	21.3%	19.1%	16.2%	15.9%	17.7%
Sonoma	n/a	n/a	20.1%	13.1%	12.1%	11.5%	12.6%
Bay Area	10.6%	13.4%	16.6%	12.5%	11.4%	12.3%	12.9%

**Table C12. At Home Workers, 2000: Station Area Buffer Analysis  
Census 2000, Summary File #3**

***At Home Workers by County of Residence, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	1,431	4,752	5,256	5,708	5,571	1,223	23,941
Contra Costa	416	1,333	641	2,798	10,605	3,183	18,976
Marin	45	269	198	914	7,705	1,996	11,127
Napa	0	0	120	360	968	1,467	2,915
San Francisco	10,963	4,539	3,573	156	28	118	19,376
San Mateo	705	2,356	1,671	2,501	3,821	1,790	12,845
Santa Clara	1,294	3,323	3,358	7,695	7,742	2,457	25,868
Solano	37	101	417	1,626	2,056	1,203	5,441
Sonoma	0	0	240	2,144	3,824	6,038	12,246
Bay Area	14,891	16,673	15,475	23,902	42,320	19,474	132,735

***At Home Worker Share of Total Commuters, by County of Residence, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	3.5%	3.7%	2.8%	3.6%	4.2%	4.1%	3.5%
Contra Costa	3.5%	3.5%	1.7%	3.2%	5.1%	5.5%	4.3%
Marin	6.7%	8.5%	3.3%	7.5%	9.3%	9.3%	8.8%
Napa	n/a	n/a	3.1%	2.9%	4.5%	7.6%	5.1%
San Francisco	4.8%	4.5%	4.4%	3.7%	1.6%	4.0%	4.6%
San Mateo	2.6%	3.1%	2.1%	3.6%	5.0%	7.6%	3.6%
Santa Clara	2.3%	2.5%	1.6%	3.3%	4.8%	6.1%	3.1%
Solano	5.1%	3.6%	2.2%	2.9%	3.0%	4.3%	3.1%
Sonoma	n/a	n/a	2.1%	3.8%	4.3%	9.0%	5.4%
Bay Area	4.1%	3.5%	2.4%	3.5%	5.0%	6.7%	4.0%

**Table C13. Total Households, 2000: Station Area Buffer Analysis**  
**Census 2000, Summary File #3**

***Total Households, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	37,601	108,205	149,607	113,795	94,389	19,770	523,366
Contra Costa	10,650	33,190	30,113	66,302	161,686	42,188	344,129
Marin	626	2,898	4,126	10,073	66,603	16,323	100,650
Napa	0	0	2,828	9,469	18,087	15,018	45,402
San Francisco	185,288	75,106	62,425	3,987	1,059	1,835	329,700
San Mateo	21,504	55,411	52,241	50,447	57,902	16,598	254,103
Santa Clara	40,303	88,582	132,063	158,532	119,632	26,751	565,863
Solano	846	2,828	14,006	44,417	48,724	19,582	130,403
Sonoma	0	0	8,590	40,577	70,181	53,055	172,403
Bay Area	296,818	366,220	455,999	497,598	638,264	211,119	2,466,019

***Share of Total Households, by County, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	7.2%	20.7%	28.6%	21.7%	18.0%	3.8%	100.0%
Contra Costa	3.1%	9.6%	8.8%	19.3%	47.0%	12.3%	100.0%
Marin	0.6%	2.9%	4.1%	10.0%	66.2%	16.2%	100.0%
Napa	0.0%	0.0%	6.2%	20.9%	39.8%	33.1%	100.0%
San Francisco	56.2%	22.8%	18.9%	1.2%	0.3%	0.6%	100.0%
San Mateo	8.5%	21.8%	20.6%	19.9%	22.8%	6.5%	100.0%
Santa Clara	7.1%	15.7%	23.3%	28.0%	21.1%	4.7%	100.0%
Solano	0.6%	2.2%	10.7%	34.1%	37.4%	15.0%	100.0%
Sonoma	0.0%	0.0%	5.0%	23.5%	40.7%	30.8%	100.0%
Bay Area	12.0%	14.9%	18.5%	20.2%	25.9%	8.6%	100.0%



**Table C14. Households with Zero Vehicles, 2000: Station Area Buffer Analysis  
Census 2000, Summary File #3**

***Households with Zero Vehicles, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	9,667	18,066	19,079	6,205	3,748	522	57,287
Contra Costa	1,656	4,232	3,780	3,871	7,478	1,337	22,353
Marin	19	112	557	753	3,229	424	5,094
Napa	0	0	173	750	1,198	682	2,803
San Francisco	66,000	15,136	11,860	859	187	135	94,178
San Mateo	2,569	4,666	3,673	1,966	2,178	456	15,507
Santa Clara	4,237	6,429	8,709	7,377	4,519	708	31,978
Solano	231	687	1,152	3,374	2,587	534	8,566
Sonoma	0	0	899	2,457	4,888	1,677	9,921
Bay Area	84,377	49,328	49,883	27,612	30,012	6,475	247,687

***Share of Total Households with Zero Vehicles, by County, Year 2000***

Proximity to Rail Stations and Ferry Terminals							
County	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	Total
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	25.7%	16.7%	12.8%	5.5%	4.0%	2.6%	10.9%
Contra Costa	15.5%	12.8%	12.6%	5.8%	4.6%	3.2%	6.5%
Marin	3.0%	3.9%	13.5%	7.5%	4.8%	2.6%	5.1%
Napa	n/a	n/a	6.1%	7.9%	6.6%	4.5%	6.2%
San Francisco	35.6%	20.2%	19.0%	21.6%	17.7%	7.4%	28.6%
San Mateo	11.9%	8.4%	7.0%	3.9%	3.8%	2.7%	6.1%
Santa Clara	10.5%	7.3%	6.6%	4.7%	3.8%	2.6%	5.7%
Solano	27.3%	24.3%	8.2%	7.6%	5.3%	2.7%	6.6%
Sonoma	n/a	n/a	10.5%	6.1%	7.0%	3.2%	5.8%
Bay Area	28.4%	13.5%	10.9%	5.5%	4.7%	3.1%	10.0%

**Table C15. Vehicles in Households, 2000: Station Area Buffer Analysis  
Census 2000, Summary File #3**

***Vehicles in Households, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	Total
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	44,281	150,417	233,768	222,578	191,373	43,778	886,195
Contra Costa	15,026	50,759	47,152	125,637	318,816	89,010	646,400
Marin	986	4,700	5,656	15,832	120,776	32,234	180,184
Napa	0	0	4,652	16,510	33,271	30,672	85,105
San Francisco	180,645	95,101	81,918	5,064	1,468	2,955	367,151
San Mateo	32,245	95,321	98,756	99,019	117,547	35,841	478,731
Santa Clara	68,700	161,459	251,572	319,004	249,426	64,261	1,114,422
Solano	960	3,590	25,468	82,267	95,996	43,722	252,004
Sonoma	0	0	13,932	74,806	128,062	110,533	327,333
Bay Area	342,844	561,346	762,874	960,717	1,256,736	453,007	4,337,525

***Average Vehicles per Household, by County, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	Total
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	1.18	1.39	1.56	1.96	2.03	2.21	1.69
Contra Costa	1.41	1.53	1.57	1.89	1.97	2.11	1.88
Marin	1.57	1.62	1.37	1.57	1.81	1.97	1.79
Napa	n/a	n/a	1.64	1.74	1.84	2.04	1.87
San Francisco	0.97	1.27	1.31	1.27	1.39	1.61	1.11
San Mateo	1.50	1.72	1.89	1.96	2.03	2.16	1.88
Santa Clara	1.70	1.82	1.90	2.01	2.08	2.40	1.97
Solano	1.13	1.27	1.82	1.85	1.97	2.23	1.93
Sonoma	n/a	n/a	1.62	1.84	1.82	2.08	1.90
Bay Area	1.16	1.53	1.67	1.93	1.97	2.15	1.76

**Table C16. Mean Household Income, 2000: Station Area Buffer Analysis  
Census 2000, Summary File #3**

***Mean Household Income, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	\$49,922	\$56,673	\$57,642	\$84,353	\$98,979	\$123,430	\$72,629
Contra Costa	\$58,351	\$61,902	\$50,582	\$66,046	\$94,247	\$117,698	\$83,675
Marin	\$140,127	\$143,227	\$56,019	\$82,113	\$115,637	\$103,228	\$108,756
Napa	n/a	n/a	\$48,816	\$52,992	\$68,396	\$89,637	\$70,985
San Francisco	\$74,235	\$86,107	\$91,836	\$71,919	\$87,968	\$80,744	\$80,325
San Mateo	\$74,405	\$85,056	\$73,745	\$96,005	\$134,682	\$139,370	\$98,874
Santa Clara	\$73,884	\$81,028	\$75,078	\$97,052	\$125,052	\$149,355	\$96,187
Solano	\$35,803	\$38,162	\$51,757	\$58,260	\$68,794	\$80,103	\$64,228
Sonoma	n/a	n/a	\$46,794	\$60,056	\$65,552	\$78,425	\$67,258
Bay Area	\$70,593	\$73,925	\$68,303	\$82,058	\$100,797	\$107,187	\$83,934

**Table C17. Low Income Households (< \$30,000), 2000: Station Area Buffer Analysis  
Census 2000, Summary File #3**

***Number of Low Income Households (Less Than \$30,000 Income), Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	16,157	37,737	46,125	19,987	12,825	2,078	134,908
Contra Costa	3,392	10,167	10,388	14,944	24,899	5,871	69,661
Marin	95	431	1,497	2,230	11,382	2,764	18,399
Napa	0	0	933	2,945	4,548	3,263	11,689
San Francisco	57,364	17,631	14,069	1,508	273	333	91,178
San Mateo	5,298	11,182	10,577	6,946	7,197	2,236	43,436
Santa Clara	9,934	17,869	25,071	23,848	14,884	2,688	94,294
Solano	483	1,463	4,203	11,923	10,612	2,981	31,665
Sonoma	0	0	3,063	10,196	17,848	12,050	43,157
Bay Area	92,725	96,478	115,925	94,526	104,469	34,264	538,387

***Low Income Household Share of Total Households, by County, Year 2000***

Proximity to Rail Stations and Ferry Terminals							
County	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	Total
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	43.0%	34.9%	30.8%	17.5%	13.5%	10.7%	25.8%
Contra Costa	32.2%	30.7%	34.7%	22.4%	15.4%	13.8%	20.2%
Marin	15.1%	14.7%	35.5%	22.3%	17.1%	16.9%	18.3%
Napa	n/a	n/a	33.1%	30.9%	25.3%	21.7%	25.7%
San Francisco	30.9%	23.5%	22.5%	39.5%	25.1%	18.4%	27.6%
San Mateo	24.4%	20.2%	20.3%	13.7%	12.4%	13.4%	17.1%
Santa Clara	24.7%	20.2%	19.0%	15.1%	12.4%	10.0%	16.6%
Solano	58.2%	52.5%	30.5%	26.8%	21.7%	15.3%	24.3%
Sonoma	n/a	n/a	35.0%	25.0%	25.5%	22.7%	25.0%
Bay Area	31.2%	26.4%	25.4%	19.0%	16.3%	16.2%	21.8%

**Table C18. Minority Population, 2000: Station Area Buffer Analysis  
Census 2000, Summary File #3**

***Minority Population, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	59,388	178,659	313,656	152,724	121,064	27,155	852,646
Contra Costa	15,397	47,844	67,926	86,222	140,371	41,647	399,407
Marin	102	512	12,786	4,210	28,564	6,861	53,035
Napa	0	0	4,695	11,139	13,072	9,441	38,347
San Francisco	223,298	109,347	92,824	8,349	1,723	2,283	437,824
San Mateo	29,644	81,437	123,720	55,654	51,968	12,382	354,806
Santa Clara	73,543	161,651	319,260	215,280	136,242	32,327	938,303
Solano	1,440	4,791	28,111	73,969	67,753	24,197	200,260
Sonoma	0	0	13,153	33,506	46,577	23,692	116,928
Bay Area	402,812	584,240	976,130	641,053	607,335	179,986	3,391,556

***Minority Share of Total Population, by County, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High Density Suburbs	Low Density Suburbs		
Alameda	66.7%	64.4%	73.1%	47.4%	45.2%	46.9%	59.1%
Contra Costa	57.6%	56.1%	73.3%	46.1%	32.3%	34.1%	42.1%
Marin	8.9%	9.5%	67.8%	19.8%	17.8%	17.0%	21.4%
Napa	n/a	n/a	52.8%	41.5%	27.6%	22.9%	30.9%
San Francisco	54.3%	57.8%	59.1%	73.4%	57.5%	47.0%	56.4%
San Mateo	54.7%	53.6%	73.5%	41.0%	34.3%	27.2%	50.2%
Santa Clara	64.4%	61.8%	73.7%	47.5%	40.2%	39.9%	55.8%
Solano	67.9%	67.5%	65.2%	56.5%	44.8%	40.4%	50.8%
Sonoma	n/a	n/a	50.9%	30.1%	25.1%	17.4%	25.5%
Bay Area	57.7%	59.7%	70.9%	45.8%	34.9%	30.5%	50.0%

**Table C19. Household Population, 2000: Station Area Buffer Analysis  
Census 2000, Summary File #3**

***Household Population, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	86,687	269,081	425,131	319,570	258,965	56,656	1,416,090
Contra Costa	25,595	84,100	92,715	184,629	431,045	119,356	937,440
Marin	1,144	5,391	12,561	20,917	156,805	38,968	235,786
Napa	0	0	8,447	26,397	46,403	37,789	119,036
San Francisco	399,997	183,752	154,697	11,254	2,774	4,517	756,991
San Mateo	52,333	149,348	166,493	135,697	149,153	43,677	696,700
Santa Clara	110,464	254,542	430,002	445,891	332,898	79,100	1,652,897
Solano	2,072	7,057	43,390	128,528	138,761	58,821	378,628
Sonoma	0	0	25,192	110,290	180,330	131,680	447,492
Bay Area	678,290	953,271	1,358,628	1,383,172	1,697,134	570,564	6,641,060

***Average Household Size, Year 2000***

County	Proximity to Rail Stations and Ferry Terminals						Total
	Within 1/2 Mile	1/2 to 1 mile	Urban	Greater than One Mile		Rural	
				High	Low		
				Density Suburbs	Density Suburbs		
Alameda	2.31	2.49	2.84	2.81	2.74	2.87	2.71
Contra Costa	2.40	2.53	3.08	2.78	2.67	2.83	2.72
Marin	1.83	1.86	3.04	2.08	2.35	2.39	2.34
Napa	0.00	0.00	2.99	2.79	2.57	2.52	2.62
San Francisco	2.16	2.45	2.48	2.82	2.62	2.46	2.30
San Mateo	2.43	2.70	3.19	2.69	2.58	2.63	2.74
Santa Clara	2.74	2.87	3.26	2.81	2.78	2.96	2.92
Solano	2.45	2.50	3.10	2.89	2.85	3.00	2.90
Sonoma	0.00	0.00	2.93	2.72	2.57	2.48	2.60
Bay Area	2.29	2.60	2.98	2.78	2.66	2.70	2.69

---

## APPENDIX D

---

### DEMOGRAPHIC CHARACTERISTICS, WALKABLE BUFFERS

---

Table D1.	SAMPLE Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries .....	D-1
Table D2.	WEIGHTED Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries .....	D-1
Table D3.	BATS2000 Demographic Characteristics by Proximity to Rail and Ferries .....	D-2
Table D4.	BATS2000 Households by Proximity to Rail and Ferry Stops by Population Density of Block Group.....	D-3
Table D5.	BATS2000 SAMPLE Households by County and Proximity to Rail and Ferries (Number of Households) .....	D-4
Table D6.	BATS2000 SAMPLE Persons by County and Proximity to Rail and Ferries (Number of Persons) .....	D-4
Table D7.	BATS2000 WEIGHTED Households by County and Proximity to Rail and Ferries (Number of Households).....	D-5
Table D8.	BATS2000 WEIGHTED Households by County and Proximity to Rail and Ferries (Column Percent).....	D-5
Table D9.	BATS2000 WEIGHTED Households by County and Proximity to Rail and Ferries (Row Percent).....	D-5
Table D10.	BATS2000 WEIGHTED Persons by County and Proximity to Rail and Ferries (Number of Persons) .....	D-6
Table D11.	BATS2000 WEIGHTED Persons by County and Proximity to Rail and Ferries (Column Percent) .....	D-6
Table D12.	BATS2000 WEIGHTED Persons by County and Proximity to Rail and Ferries (Row Percent) .....	D-6
Table D13.	Income Distribution of BATS2000 SAMPLE Households by Proximity to Rail and Ferries (Number of Households) .....	D-7

---

## APPENDIX D

---

### DEMOGRAPHIC CHARACTERISTICS, WALKABLE BUFFERS

---

(List of Tables, continued)

Table D14. Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Number of Households) .....	D-7
Table D15. Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Column Percent) .....	D-8
Table D16. Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Row Percent) .....	D-8
Table D17. Poverty Thresholds, 2000 Decennial Census.....	D-9
Table D18. Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Number of Households).....	D-11
Table D19. Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Column Percent).....	D-12
Table D20. Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Row Percent).....	D-13
Table D21. Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Number of Persons).....	D-14
Table D22. Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Column Percent).....	D-15
Table D23. Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Row Percent).....	D-16



**Table D1. SAMPLE Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries**

Proximity of Household to Rail Stations and Ferry Terminals	Households		Residents		Vehicles	
	Number	Percent	Number	Percent	Number	Percent
Within 1/2 mile	1,407	9%	2,583	7%	1,766	6%
1/2 mile to 1 mile	1,995	13%	4,222	12%	3,252	12%
Greater than 1 mile - Urban	2,083	14%	4,533	13%	3,366	12%
Greater than 1 mile - High-Suburban	3,199	21%	7,735	22%	6,217	22%
Greater than 1 mile - Low-Suburban	5,235	35%	12,743	37%	10,741	38%
Greater than 1 mile - Rural	1,145	8%	2,864	8%	2,593	9%
Total	15,064	100%	34,680	100%	27,935	100%

**Table D2. WEIGHTED Distribution of BATS2000 Households and Residents by Proximity to Rail and Ferries**

Proximity of Household to Rail Stations and Ferry Terminals	Households		Residents		Vehicles	
	Number	Percent	Number	Percent	Number	Percent
Within 1/2 mile	308,366	13%	706,023	11%	352,366	8%
1/2 mile to 1 mile	358,862	15%	926,526	14%	563,149	13%
Greater than 1 mile - Urban	440,088	18%	1,239,513	19%	702,178	16%
Greater than 1 mile - High-Suburban	503,811	20%	1,409,523	21%	946,215	22%
Greater than 1 mile - Low-Suburban	707,259	29%	1,930,068	29%	1,457,959	33%
Greater than 1 mile - Rural	147,634	6%	429,408	6%	335,063	8%
Total	2,466,020	100%	6,641,061	100%	4,356,930	100%

**Table D3. BATS2000 Demographic Characteristics by Proximity to Rail and Ferries**

Proximity of Household to Rail Stations and Ferry Terminals	Total Households	Total Persons	Total Vehicles	Persons per Household	Vehicles per Household	Vehicles per Person	Average Income per Household	Average Income per Person
Within 1/2 mile	308,366	706,023	352,366	2.29	1.14	0.50	\$70,448	\$30,769
1/2 mile to 1 mile	358,862	926,526	563,149	2.58	1.57	0.61	\$73,580	\$28,499
Greater than 1 mile - Urban	440,088	1,239,513	702,178	2.82	1.60	0.57	\$67,947	\$24,124
Greater than 1 mile - High-Suburban	503,811	1,409,523	946,215	2.80	1.88	0.67	\$79,183	\$28,303
Greater than 1 mile - Low-Suburban	707,259	1,930,068	1,457,959	2.73	2.06	0.76	\$93,441	\$34,241
Greater than 1 mile - Rural	147,634	429,408	335,063	2.91	2.27	0.78	\$87,134	\$29,957
Total	2,466,020	6,641,061	4,356,930	2.69	1.77	0.66	\$79,835	\$29,645

**Table D4. BATS2000 Households by Proximity to Rail and Ferry Stops by Population Density of Block Group**

Proximity of Household to Rail and Ferry Stops	Density	Sample Households		Weighted Households	
		Number	Percent	Number	Percent
Within 1/2 mile	Urban	1,018	72.4%	241,443	78.3%
	High Suburban	249	17.7%	43,325	14.0%
	Low Suburban	129	9.2%	20,834	6.8%
	Rural	11	0.8%	2,764	0.9%
1/2 mile to 1 mile	Urban	1,046	52.4%	210,551	58.7%
	High Suburban	610	30.6%	97,998	27.3%
	Low Suburban	329	16.5%	48,865	13.6%
	Rural	10	0.5%	1,449	0.4%
Greater than 1 mile	Urban	2,083	17.9%	440,088	24.5%
	High Suburban	3,199	27.4%	503,811	28.0%
	Low Suburban	5,235	44.9%	707,259	39.3%
	Rural	1,145	9.8%	147,634	8.2%
Total		15,064	100.0%	2,466,020	100.0%

**Table D5. BATS2000 SAMPLE Households by County and Proximity to Rail and Ferries (Number of Households)**

County of Residence	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
Alameda	211	600	696	755	688	95	3045
Contra Costa	81	194	118	379	1339	154	2265
Marin	4	18	10	65	471	76	644
Napa	0	0	26	105	327	164	622
San Francisco	780	329	234	4	6	0	1353
San Mateo	115	312	268	317	498	104	1614
Santa Clara	211	526	642	1098	981	105	3563
Solano	5	16	48	217	394	96	776
Sonoma	0	0	41	259	531	351	1182
Total	1407	1995	2083	3199	5235	1145	15064

**Table D6. BATS2000 SAMPLE Persons by County and Proximity to Rail and Ferries (Number of Persons)**

County of Residence	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
Alameda	406	1,217	1,498	1,854	1,726	254	6,955
Contra Costa	163	417	273	899	3,350	426	5,528
Marin	6	31	15	116	1,043	155	1,366
Napa	0	0	63	215	726	392	1,396
San Francisco	1,350	595	450	8	16	0	2,419
San Mateo	212	716	578	768	1,151	252	3,677
Santa Clara	437	1,203	1,449	2,701	2,455	279	8,524
Solano	9	43	125	560	1,056	251	2,044
Sonoma	0	0	82	614	1,220	855	2,771
Total	2,583	4,222	4,533	7,735	12,743	2,864	34,680

**Table D7. BATS2000 WEIGHTED Households by County and Proximity to Rail and Ferries (Number of Households)**

County of Residence	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
Alameda	45,260	104,921	144,753	116,630	95,431	16,195	523,190
Contra Costa	14,040	32,491	27,078	66,314	183,509	20,871	344,304
Marin	598	2,843	2,779	12,378	70,722	11,428	100,748
Napa	0	0	2,098	8,810	23,466	11,142	45,516
San Francisco	189,875	71,850	65,079	1,303	1,592	0	329,699
San Mateo	18,424	53,260	52,838	48,679	68,930	11,972	254,103
Santa Clara	38,133	89,236	127,788	168,464	125,636	16,609	565,865
Solano	2,036	4,260	10,803	38,390	62,124	12,677	130,290
Sonoma	0	0	6,873	42,844	75,848	46,740	172,305
Total	308,366	358,862	440,088	503,811	707,259	147,634	2,466,020

**Table D8. BATS2000 WEIGHTED Households by County and Proximity to Rail and Ferries (Column Percent)**

County of Residence	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
Alameda	14.7%	29.2%	32.9%	23.1%	13.5%	11.0%	21.2%
Contra Costa	4.6%	9.1%	6.2%	13.2%	25.9%	14.1%	14.0%
Marin	0.2%	0.8%	0.6%	2.5%	10.0%	7.7%	4.1%
Napa	0.0%	0.0%	0.5%	1.7%	3.3%	7.5%	1.8%
San Francisco	61.6%	20.0%	14.8%	0.3%	0.2%	0.0%	13.4%
San Mateo	6.0%	14.8%	12.0%	9.7%	9.7%	8.1%	10.3%
Santa Clara	12.4%	24.9%	29.0%	33.4%	17.8%	11.3%	22.9%
Solano	0.7%	1.2%	2.5%	7.6%	8.8%	8.6%	5.3%
Sonoma	0.0%	0.0%	1.6%	8.5%	10.7%	31.7%	7.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Table D9. BATS2000 WEIGHTED Households by County and Proximity to Rail and Ferries (Row Percent)**

County of Residence	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
Alameda	8.7%	20.1%	27.7%	22.3%	18.2%	3.1%	100.0%
Contra Costa	4.1%	9.4%	7.9%	19.3%	53.3%	6.1%	100.0%
Marin	0.6%	2.8%	2.8%	12.3%	70.2%	11.3%	100.0%
Napa	0.0%	0.0%	4.6%	19.4%	51.6%	24.5%	100.0%
San Francisco	57.6%	21.8%	19.7%	0.4%	0.5%	0.0%	100.0%
San Mateo	7.3%	21.0%	20.8%	19.2%	27.1%	4.7%	100.0%
Santa Clara	6.7%	15.8%	22.6%	29.8%	22.2%	2.9%	100.0%
Solano	1.6%	3.3%	8.3%	29.5%	47.7%	9.7%	100.0%
Sonoma	0.0%	0.0%	4.0%	24.9%	44.0%	27.1%	100.0%
Total	12.5%	14.6%	17.8%	20.4%	28.7%	6.0%	100.0%

**Table D10. BATS2000 WEIGHTED Persons by County and Proximity to Rail and Ferries (Number of Persons)**

County of Residence	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
Alameda	111,917	266,429	390,760	333,765	267,451	45,768	1,416,090
Contra Costa	32,672	81,843	80,462	181,805	495,283	65,375	937,440
Marin	920	5,424	5,478	28,329	168,821	26,813	235,787
Napa	0	0	5,402	22,012	62,464	29,158	119,036
San Francisco	413,917	158,575	176,031	3,322	5,146	0	756,991
San Mateo	35,868	144,696	147,174	137,402	194,498	37,062	696,700
Santa Clara	105,966	253,245	392,250	478,267	364,724	58,446	1,652,898
Solano	4,764	16,314	26,602	114,739	179,591	36,618	378,628
Sonoma	0	0	15,355	109,880	192,089	130,167	447,492
Total	706,023	926,526	1,239,513	1,409,523	1,930,068	429,408	6,641,061

**Table D11. BATS2000 WEIGHTED Persons by County and Proximity to Rail and Ferries (Column Percent)**

County of Residence	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
Alameda	15.9%	28.8%	31.5%	23.7%	13.9%	10.7%	21.3%
Contra Costa	4.6%	8.8%	6.5%	12.9%	25.7%	15.2%	14.1%
Marin	0.1%	0.6%	0.4%	2.0%	8.7%	6.2%	3.6%
Napa	0.0%	0.0%	0.4%	1.6%	3.2%	6.8%	1.8%
San Francisco	58.6%	17.1%	14.2%	0.2%	0.3%	0.0%	11.4%
San Mateo	5.1%	15.6%	11.9%	9.7%	10.1%	8.6%	10.5%
Santa Clara	15.0%	27.3%	31.6%	33.9%	18.9%	13.6%	24.9%
Solano	0.7%	1.8%	2.1%	8.1%	9.3%	8.5%	5.7%
Sonoma	0.0%	0.0%	1.2%	7.8%	10.0%	30.3%	6.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Table D12. BATS2000 WEIGHTED Persons by County and Proximity to Rail and Ferries (Row Percent)**

County of Residence	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
Alameda	7.9%	18.8%	27.6%	23.6%	18.9%	3.2%	100.0%
Contra Costa	3.5%	8.7%	8.6%	19.4%	52.8%	7.0%	100.0%
Marin	0.4%	2.3%	2.3%	12.0%	71.6%	11.4%	100.0%
Napa	0.0%	0.0%	4.5%	18.5%	52.5%	24.5%	100.0%
San Francisco	54.7%	20.9%	23.3%	0.4%	0.7%	0.0%	100.0%
San Mateo	5.1%	20.8%	21.1%	19.7%	27.9%	5.3%	100.0%
Santa Clara	6.4%	15.3%	23.7%	28.9%	22.1%	3.5%	100.0%
Solano	1.3%	4.3%	7.0%	30.3%	47.4%	9.7%	100.0%
Sonoma	0.0%	0.0%	3.4%	24.6%	42.9%	29.1%	100.0%
Total	10.6%	14.0%	18.7%	21.2%	29.1%	6.5%	100.0%

**Table D13. Income Distribution of BATS2000 SAMPLE Households by Proximity to Rail and Ferries (Number of Households)**

Household Income Category	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
Below \$10,000	47	52	40	38	64	20	261
\$10,000 to below \$15,000	35	46	38	54	67	15	255
\$15,000 to below \$20,000	37	64	54	74	113	38	380
\$20,000 to below \$25,000	60	61	66	86	126	38	437
\$25,000 to below \$30,000	54	76	83	102	155	37	507
\$30,000 to below \$35,000	54	77	91	91	127	30	470
\$35,000 to below \$40,000	62	85	90	128	176	46	587
\$40,000 to below \$45,000	89	116	142	165	272	62	846
\$45,000 to below \$50,000	99	108	146	207	312	69	941
\$50,000 to below \$60,000	156	214	267	343	467	116	1,563
\$60,000 to below \$75,000	186	244	294	409	642	138	1,913
\$75,000 to below \$100,000	232	365	373	612	979	210	2,771
\$100,000 to below \$125,000	135	205	203	422	738	139	1,842
\$125,000 to below \$150,000	59	106	81	203	372	54	875
\$150,000 or more	102	176	115	265	625	133	1,416
Total	1,407	1,995	2,083	3,199	5,235	1,145	15,064

**Table D14. Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Number of Households)**

Household Income Category	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
Below \$10,000	11,194	12,260	11,776	8,083	12,340	3,923	59,578
\$10,000 to below \$15,000	16,988	17,136	10,186	15,112	11,196	2,107	72,725
\$15,000 to below \$20,000	6,922	14,062	13,984	16,985	15,489	3,520	70,962
\$20,000 to below \$25,000	17,493	12,544	16,512	12,188	16,894	4,400	80,031
\$25,000 to below \$30,000	16,360	17,176	20,353	15,871	21,377	6,569	97,706
\$30,000 to below \$35,000	10,891	13,037	20,333	14,315	15,180	3,413	77,169
\$35,000 to below \$40,000	17,553	16,320	17,208	20,477	24,495	6,625	102,677
\$40,000 to below \$45,000	14,387	21,408	29,617	28,599	39,947	7,581	141,538
\$45,000 to below \$50,000	25,760	23,428	31,200	35,729	40,652	9,158	165,927
\$50,000 to below \$60,000	30,976	33,663	60,502	51,820	62,986	14,583	254,531
\$60,000 to below \$75,000	37,474	42,751	61,665	65,180	83,183	16,477	306,730
\$75,000 to below \$100,000	44,263	60,711	78,588	92,541	133,390	28,194	437,687
\$100,000 to below \$125,000	27,195	33,157	34,979	65,481	97,185	18,465	276,461
\$125,000 to below \$150,000	10,425	15,258	14,265	26,512	49,028	6,063	121,551
\$150,000 or more	20,485	25,951	18,921	34,917	83,919	16,554	200,747
Total	308,366	358,862	440,088	503,811	707,259	147,634	2,466,020

**Table D15. Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Column Percent)**

Household Income Category	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
	Urban	High-Sub	Low-Sub	Rural			
Below \$10,000	3.6%	3.4%	2.7%	1.6%	1.7%	2.7%	2.4%
\$10,000 to below \$15,000	5.5%	4.8%	2.3%	3.0%	1.6%	1.4%	2.9%
\$15,000 to below \$20,000	2.2%	3.9%	3.2%	3.4%	2.2%	2.4%	2.9%
\$20,000 to below \$25,000	5.7%	3.5%	3.8%	2.4%	2.4%	3.0%	3.2%
\$25,000 to below \$30,000	5.3%	4.8%	4.6%	3.2%	3.0%	4.4%	4.0%
\$30,000 to below \$35,000	3.5%	3.6%	4.6%	2.8%	2.1%	2.3%	3.1%
\$35,000 to below \$40,000	5.7%	4.5%	3.9%	4.1%	3.5%	4.5%	4.2%
\$40,000 to below \$45,000	4.7%	6.0%	6.7%	5.7%	5.6%	5.1%	5.7%
\$45,000 to below \$50,000	8.4%	6.5%	7.1%	7.1%	5.7%	6.2%	6.7%
\$50,000 to below \$60,000	10.0%	9.4%	13.7%	10.3%	8.9%	9.9%	10.3%
\$60,000 to below \$75,000	12.2%	11.9%	14.0%	12.9%	11.8%	11.2%	12.4%
\$75,000 to below \$100,000	14.4%	16.9%	17.9%	18.4%	18.9%	19.1%	17.7%
\$100,000 to below \$125,000	8.8%	9.2%	7.9%	13.0%	13.7%	12.5%	11.2%
\$125,000 to below \$150,000	3.4%	4.3%	3.2%	5.3%	6.9%	4.1%	4.9%
\$150,000 or more	6.6%	7.2%	4.3%	6.9%	11.9%	11.2%	8.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Table D16. Income Distribution of BATS2000 WEIGHTED Households by Proximity to Rail and Ferries (Row Percent)**

Household Income Category	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
Below \$10,000	18.8%	20.6%	19.8%	13.6%	20.7%	6.6%	100.0%
\$10,000 to below \$15,000	23.4%	23.6%	14.0%	20.8%	15.4%	2.9%	100.0%
\$15,000 to below \$20,000	9.8%	19.8%	19.7%	23.9%	21.8%	5.0%	100.0%
\$20,000 to below \$25,000	21.9%	15.7%	20.6%	15.2%	21.1%	5.5%	100.0%
\$25,000 to below \$30,000	16.7%	17.6%	20.8%	16.2%	21.9%	6.7%	100.0%
\$30,000 to below \$35,000	14.1%	16.9%	26.3%	18.6%	19.7%	4.4%	100.0%
\$35,000 to below \$40,000	17.1%	15.9%	16.8%	19.9%	23.9%	6.5%	100.0%
\$40,000 to below \$45,000	10.2%	15.1%	20.9%	20.2%	28.2%	5.4%	100.0%
\$45,000 to below \$50,000	15.5%	14.1%	18.8%	21.5%	24.5%	5.5%	100.0%
\$50,000 to below \$60,000	12.2%	13.2%	23.8%	20.4%	24.7%	5.7%	100.0%
\$60,000 to below \$75,000	12.2%	13.9%	20.1%	21.3%	27.1%	5.4%	100.0%
\$75,000 to below \$100,000	10.1%	13.9%	18.0%	21.1%	30.5%	6.4%	100.0%
\$100,000 to below \$125,000	9.8%	12.0%	12.7%	23.7%	35.2%	6.7%	100.0%
\$125,000 to below \$150,000	8.6%	12.6%	11.7%	21.8%	40.3%	5.0%	100.0%
\$150,000 or more	10.2%	12.9%	9.4%	17.4%	41.8%	8.2%	100.0%
Total	12.5%	14.6%	17.8%	20.4%	28.7%	6.0%	100.0%



**Table D17. Poverty Thresholds, 2000 Decennial Census**

*200 % Poverty Thresholds: 1999 (Income collected in 2000 Decennial Census)*

Size of Family Unit	Weighted Average Thresholds	Related children under 18 years							
		None	One	Two	Three	Four	Five	Six	Seven Eight or more
One person (unrelated individual)	\$17,002								
Under 65 years	\$17,334	\$17,334							
65 years and over	\$15,980	\$15,980							
Two persons	\$21,738								
Householder under 65 years	\$22,428	\$22,312	\$22,966						
Householder 65 years and over	\$20,150	\$20,140	\$22,880						
Three persons	\$26,580	\$26,064	\$26,820	\$26,846					
Four persons	\$34,058	\$34,368	\$34,930	\$33,790	\$33,908				
Five persons	\$40,254	\$41,446	\$42,048	\$40,760	\$39,764	\$39,156			
Six persons	\$45,454	\$47,670	\$47,860	\$46,872	\$45,928	\$44,522	\$43,690		
Seven persons	\$51,824	\$54,850	\$55,192	\$54,012	\$53,190	\$51,656	\$49,868	\$47,906	
Eight persons	\$57,934	\$61,346	\$61,888	\$60,774	\$59,798	\$58,412	\$56,654	\$54,824	\$54,360
Nine persons or more	\$68,834	\$73,794	\$74,152	\$73,166	\$72,338	\$70,978	\$69,108	\$67,416	\$66,998 \$64,416

*500% Poverty Thresholds*

Size of Family Unit	Weighted Average Thresholds	Related children under 18 years							
		None	One	Two	Three	Four	Five	Six	Seven Eight or more
One person (unrelated individual)	\$42,505								
Under 65 years	\$43,335	\$43,335							
65 years and over	\$39,950	\$39,950							
Two persons	\$54,345								
Householder under 65 years	\$56,070	\$55,780	\$57,415						
Householder 65 years and over	\$50,375	\$50,350	\$57,200						
Three persons	\$66,450	\$65,160	\$67,050	\$67,115					
Four persons	\$85,145	\$85,920	\$87,325	\$84,475	\$84,770				
Five persons	\$100,635	\$103,615	\$105,120	\$101,900	\$99,410	\$97,890			
Six persons	\$113,635	\$119,175	\$119,650	\$117,180	\$114,820	\$111,305	\$109,225		
Seven persons	\$129,560	\$137,125	\$137,980	\$135,030	\$132,975	\$129,140	\$124,670	\$119,765	
Eight persons	\$144,835	\$153,365	\$154,720	\$151,935	\$149,495	\$146,030	\$141,635	\$137,060	\$135,900
Nine persons or more	\$172,085	\$184,485	\$185,380	\$182,915	\$180,845	\$177,445	\$172,770	\$168,540	\$167,495 \$161,040

[This page intentionally left blank]

**Table D18. Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Number of Households)**

Demographic Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
HOUSEHOLD SIZE							
One	124,746	107,716	117,289	104,890	142,904	25,843	623,387
Two	85,509	106,265	118,334	156,864	236,169	49,990	753,130
Three or More	98,111	144,881	204,465	242,058	328,187	71,801	1,089,503
HOUSEHOLD INCOME							
Low (<200% of Poverty Level)	54,310	62,264	64,326	58,793	55,520	17,050	312,263
Medium (201%-500% of Poverty Level)	90,667	121,523	175,731	185,234	211,647	51,894	836,694
High (>500% of Poverty Level)	129,663	137,224	159,712	209,379	350,330	63,853	1,050,161
Unknown Income	33,726	37,852	40,320	50,405	89,763	14,838	266,903
VEHICLE AVAILABILITY							
Zero	88,439	49,950	48,560	32,248	15,459	2,618	237,275
One	120,290	136,005	173,196	144,996	188,406	31,317	794,210
Two or More	99,637	172,907	218,332	326,567	503,394	113,699	1,434,535
BICYCLE AVAILABILITY							
Zero	139,925	150,518	193,160	190,527	250,672	51,322	976,123
One	77,425	74,911	96,243	94,379	122,765	23,669	489,392
Two or More	91,016	133,433	150,685	218,905	333,822	72,643	1,000,505
HOUSEHOLD TYPE							
Single-Family	125,492	200,354	244,354	401,683	608,749	135,813	1,716,445
Multi-Family	182,874	158,508	195,734	102,128	98,510	11,821	749,575
TENURE							
Rent	206,896	202,796	262,853	176,559	187,490	46,241	1,082,834
Own	101,470	156,067	177,236	327,252	519,770	101,392	1,383,187
HOUSEHOLD TYPE BY TENURE							
Single-Family, Rent	37,529	56,587	76,367	81,512	97,531	35,687	385,213
Single-Family, Own	87,963	143,767	167,987	320,171	511,218	100,126	1,331,232
Multi-Family, Rent	169,366	146,209	186,485	95,047	89,959	10,554	697,620
Multi-Family, Own	13,507	12,300	9,249	7,081	8,551	1,267	51,955
WORKERS IN HOUSEHOLD							
Zero	44,285	50,797	47,758	73,865	111,054	24,071	351,830
One	148,626	150,813	208,414	189,677	267,050	55,903	1,020,484
Two or More	115,455	157,252	183,916	240,269	329,155	67,660	1,093,706
LICENSED DRIVERS							
Zero	27,364	20,194	20,887	24,769	13,674	3,252	110,140
One	133,457	134,561	162,608	134,345	179,893	32,302	777,165
Two or More	147,545	204,107	256,594	344,698	513,692	112,080	1,578,715
IN-HOME WEB ACCESS							
Yes	210,749	241,799	290,427	359,571	541,807	113,131	1,757,485
No	97,617	117,063	149,662	144,240	165,452	34,503	708,536
HOUSEHOLD LIFE CYCLE							
One Adult, No Children	110,721	86,299	101,221	77,759	102,174	18,605	496,780
Two or More Adults, No Children	80,944	89,012	92,752	110,040	156,067	34,419	563,235
One Adult, With Children	17,637	23,636	40,032	37,422	34,283	6,628	159,637
Two or More Adults, With Children	69,919	116,835	158,700	195,825	277,300	60,613	879,191
One Adult, Retired, No Children	14,025	21,417	16,069	27,131	40,730	7,237	126,608
Two or More Adults, Retired, No Children	15,119	21,664	31,315	55,636	96,706	20,130	240,570
TOTAL	308,366	358,862	440,088	503,811	707,259	147,634	2,466,020

**Table D19. Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Column Percent)**

Demographic Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
HOUSEHOLD SIZE							
One	40%	30%	27%	21%	20%	18%	25%
Two	28%	30%	27%	31%	33%	34%	31%
Three or More	32%	40%	46%	48%	46%	49%	44%
HOUSEHOLD INCOME							
Low (<200% of Poverty Level)	18%	17%	15%	12%	8%	12%	13%
Medium (201%-500% of Poverty Level)	29%	34%	40%	37%	30%	35%	34%
High (>500% of Poverty Level)	42%	38%	36%	42%	50%	43%	43%
Unknown Income	11%	11%	9%	10%	13%	10%	11%
VEHICLE AVAILABILITY							
Zero	29%	14%	11%	6%	2%	2%	10%
One	39%	38%	39%	29%	27%	21%	32%
Two or More	32%	48%	50%	65%	71%	77%	58%
BICYCLE AVAILABILITY							
Zero	45%	42%	44%	38%	35%	35%	40%
One	25%	21%	22%	19%	17%	16%	20%
Two or More	30%	37%	34%	43%	47%	49%	41%
HOUSEHOLD TYPE							
Single-Family	41%	56%	56%	80%	86%	92%	70%
Multi-Family	59%	44%	44%	20%	14%	8%	30%
TENURE							
Rent	67%	57%	60%	35%	27%	31%	44%
Own	33%	43%	40%	65%	73%	69%	56%
HOUSEHOLD TYPE BY TENURE							
Single-Family, Rent	12%	16%	17%	16%	14%	24%	16%
Single-Family, Own	29%	40%	38%	64%	72%	68%	54%
Multi-Family, Rent	55%	41%	42%	19%	13%	7%	28%
Multi-Family, Own	4%	3%	2%	1%	1%	1%	2%
WORKERS IN HOUSEHOLD							
Zero	14%	14%	11%	15%	16%	16%	14%
One	48%	42%	47%	38%	38%	38%	41%
Two or More	37%	44%	42%	48%	47%	46%	44%
LICENSED DRIVERS							
Zero	9%	6%	5%	5%	2%	2%	4%
One	43%	37%	37%	27%	25%	22%	32%
Two or More	48%	57%	58%	68%	73%	76%	64%
IN-HOME WEB ACCESS							
Yes	68%	67%	66%	71%	77%	77%	71%
No	32%	33%	34%	29%	23%	23%	29%
HOUSEHOLD LIFE CYCLE							
One Adult, No Children	36%	24%	23%	15%	14%	13%	20%
Two or More Adults, No Children	26%	25%	21%	22%	22%	23%	23%
One Adult, With Children	6%	7%	9%	7%	5%	4%	6%
Two or More Adults, With Children	23%	33%	36%	39%	39%	41%	36%
One Adult, Retired, No Children	5%	6%	4%	5%	6%	5%	5%
Two or More Adults, Retired, No Children	5%	6%	7%	11%	14%	14%	10%
TOTAL	100%	100%	100%	100%	100%	100%	100%

**Table D20. Demographic Profile of BATS2000 Households by Proximity to Rail and Ferries (Row Percent)**

Demographic Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within	1/2 mile to	Greater than 1 mile				
	1/2 mile	1 mile	Urban	High-Sub	Low-Sub	Rural	
HOUSEHOLD SIZE							
One	20%	17%	19%	17%	23%	4%	100%
Two	11%	14%	16%	21%	31%	7%	100%
Three or More	9%	13%	19%	22%	30%	7%	100%
HOUSEHOLD INCOME							
Low (<200% of Poverty Level)	17%	20%	21%	19%	18%	5%	100%
Medium (201%-500% of Poverty Level)	11%	15%	21%	22%	25%	6%	100%
High (>500% of Poverty Level)	12%	13%	15%	20%	33%	6%	100%
Unknown Income	13%	14%	15%	19%	34%	6%	100%
VEHICLE AVAILABILITY							
Zero	37%	21%	20%	14%	7%	1%	100%
One	15%	17%	22%	18%	24%	4%	100%
Two or More	7%	12%	15%	23%	35%	8%	100%
BICYCLE AVAILABILITY							
Zero	14%	15%	20%	20%	26%	5%	100%
One	16%	15%	20%	19%	25%	5%	100%
Two or More	9%	13%	15%	22%	33%	7%	100%
HOUSEHOLD TYPE							
Single-Family	7%	12%	14%	23%	35%	8%	100%
Multi-Family	24%	21%	26%	14%	13%	2%	100%
TENURE							
Rent	19%	19%	24%	16%	17%	4%	100%
Own	7%	11%	13%	24%	38%	7%	100%
HOUSEHOLD TYPE BY TENURE							
Single-Family, Rent	10%	15%	20%	21%	25%	9%	100%
Single-Family, Own	7%	11%	13%	24%	38%	8%	100%
Multi-Family, Rent	24%	21%	27%	14%	13%	2%	100%
Multi-Family, Own	26%	24%	18%	14%	16%	2%	100%
WORKERS IN HOUSEHOLD							
Zero	13%	14%	14%	21%	32%	7%	100%
One	15%	15%	20%	19%	26%	5%	100%
Two or More	11%	14%	17%	22%	30%	6%	100%
LICENSED DRIVERS							
Zero	25%	18%	19%	22%	12%	3%	100%
One	17%	17%	21%	17%	23%	4%	100%
Two or More	9%	13%	16%	22%	33%	7%	100%
IN-HOME WEB ACCESS							
Yes	12%	14%	17%	20%	31%	6%	100%
No	14%	17%	21%	20%	23%	5%	100%
HOUSEHOLD LIFE CYCLE							
One Adult, No Children	22%	17%	20%	16%	21%	4%	100%
Two or More Adults, No Children	14%	16%	16%	20%	28%	6%	100%
One Adult, With Children	11%	15%	25%	23%	21%	4%	100%
Two or More Adults, With Children	8%	13%	18%	22%	32%	7%	100%
One Adult, Retired, No Children	11%	17%	13%	21%	32%	6%	100%
Two or More Adults, Retired, No Children	6%	9%	13%	23%	40%	8%	100%
TOTAL	13%	15%	18%	20%	29%	6%	100%

**Table D21. Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries  
(Number of Persons)**

Demographic Characteristic	Proximity of Resident's Home to Rail Stations and Ferry Terminals						Total	
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile					
			Urban	High-Sub	Low-Sub	Rural		
AGE								
Average age	33.3	32.0	30.2	33.4	35.3	34.5	33.2	
17 and under	167,395	238,559	395,828	418,656	556,836	135,824	1,913,097	
18 - 64	495,792	626,747	767,943	864,220	1,173,949	255,997	4,184,649	
65 and over	37,169	50,832	59,510	112,130	173,968	34,377	467,986	
Unknown age	5,668	10,388	16,233	14,516	25,314	3,210	75,328	
DISABILITY STATUS								
Disabled	19,624	25,082	41,102	46,738	39,473	11,472	183,491	
Not Disabled	686,399	901,444	1,198,411	1,362,785	1,890,595	417,936	6,457,570	
GENDER								
Male	340,337	453,140	599,899	657,441	930,233	207,915	3,188,964	
Female	365,686	473,386	639,615	752,082	999,835	221,493	3,452,097	
RACE / ETHNICITY								
White	326,059	416,271	406,887	780,679	1,287,499	286,922	3,504,317	
Hispanic/Latino	118,277	184,994	271,299	237,072	171,457	72,456	1,055,555	
Black/African American	55,658	93,080	153,641	76,828	86,755	14,004	479,966	
Asian/Pacific Islander	165,171	174,357	322,186	213,716	247,967	29,026	1,152,422	
Other	40,857	57,824	85,501	101,228	136,390	27,001	448,800	
DRIVER'S LICENSE STATUS BY AGE GROUP (excluding persons not reporting age)								
17 and under	Licensed	4,723	8,075	12,981	17,705	34,288	8,721	86,494
	Unlicensed	162,672	230,484	382,847	400,950	522,548	127,103	1,826,604
18 - 64	Licensed	442,083	567,265	707,157	813,516	1,135,300	249,965	3,915,286
	Unlicensed	53,709	59,482	60,786	50,704	38,649	6,032	269,363
65 and over	Licensed	25,607	36,535	37,861	86,243	153,359	30,980	370,586
	Unlicensed	11,561	14,297	21,648	25,887	20,609	3,397	97,400
EMPLOYMENT STATUS BY AGE GROUP (excluding persons not reporting age)								
17 and under	Employed	3,117	7,958	9,022	14,731	26,341	4,794	65,963
	Not Employed	164,278	230,601	386,806	403,925	530,495	131,029	1,847,135
18 - 64	Employed	401,607	505,452	613,127	702,533	938,608	195,519	3,356,846
	Not Employed	94,185	121,295	154,816	161,687	235,341	60,478	827,803
65 and over	Employed	7,065	8,590	8,252	16,324	30,386	6,324	76,941
	Not Employed	30,104	42,243	51,257	95,807	143,582	28,053	391,046
NUMBER OF JOBS (workers only)								
One	376,547	480,134	583,472	674,771	921,502	187,933	3,224,359	
Two or more	36,989	42,667	48,084	61,011	80,220	19,484	288,455	
WORK STATUS (workers only)								
Full-time	350,627	446,398	548,432	613,618	820,688	166,394	2,946,156	
Part-time	56,406	68,568	77,805	112,279	169,238	37,486	521,781	
Occasional	6,504	7,834	5,320	9,885	11,796	3,538	44,877	
WORK TIME FLEXIBILITY (workers only)								
No flexibility	131,838	177,803	265,299	286,493	336,808	72,508	1,270,749	
Some flexibility	126,216	155,087	189,215	213,193	295,056	52,742	1,031,508	
Very flexible	136,971	161,156	159,511	203,765	312,308	70,440	1,044,150	
Don't Know/Refused	18,512	28,754	17,532	32,332	57,550	11,727	166,407	
TOTAL	706,023	926,526	1,239,513	1,409,523	1,930,068	429,408	6,641,061	

**Table D22. Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Column Percent)**

Demographic Characteristic	Proximity of Resident's Home to Rail Stations and Ferry Terminals						Total	
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile					
			Urban	High-Sub	Low-Sub	Rural		
AGE								
Average age	33.3	32.0	30.2	33.4	35.3	34.5	33.2	
17 and under	24%	26%	32%	30%	29%	32%	29%	
18 - 64	70%	68%	62%	61%	61%	60%	63%	
65 and over	5%	5%	5%	8%	9%	8%	7%	
Unknown age	1%	1%	1%	1%	1%	1%	1%	
DISABILITY STATUS								
Disabled	3%	3%	3%	3%	2%	3%	3%	
Not Disabled	97%	97%	97%	97%	98%	97%	97%	
GENDER								
Male	48%	49%	48%	47%	48%	48%	48%	
Female	52%	51%	52%	53%	52%	52%	52%	
RACE / ETHNICITY								
White	46%	45%	33%	55%	67%	67%	53%	
Hispanic/Latino	17%	20%	22%	17%	9%	17%	16%	
Black/African American	8%	10%	12%	5%	4%	3%	7%	
Asian/Pacific Islander	23%	19%	26%	15%	13%	7%	17%	
Other	6%	6%	7%	7%	7%	6%	7%	
DRIVER'S LICENSE STATUS BY AGE GROUP (excluding persons not reporting age)								
17 and under	Licensed	3%	3%	3%	4%	6%	6%	5%
	Unlicensed	97%	97%	97%	96%	94%	94%	95%
18 - 64	Licensed	89%	91%	92%	94%	97%	98%	94%
	Unlicensed	11%	9%	8%	6%	3%	2%	6%
65 and over	Licensed	69%	72%	64%	77%	88%	90%	79%
	Unlicensed	31%	28%	36%	23%	12%	10%	21%
EMPLOYMENT STATUS BY AGE GROUP (excluding persons not reporting age)								
17 and under	Employed	2%	3%	2%	4%	5%	4%	3%
	Not Employed	98%	97%	98%	96%	95%	96%	97%
18 - 64	Employed	81%	81%	80%	81%	80%	76%	80%
	Not Employed	19%	19%	20%	19%	20%	24%	20%
65 and over	Employed	19%	17%	14%	15%	17%	18%	16%
	Not Employed	81%	83%	86%	85%	83%	82%	84%
NUMBER OF JOBS (workers only)								
	One	91%	92%	92%	92%	92%	91%	92%
	Two or more	9%	8%	8%	8%	8%	9%	8%
WORK STATUS (workers only)								
	Full-time	85%	85%	87%	83%	82%	80%	84%
	Part-time	14%	13%	12%	15%	17%	18%	15%
	Occasional	2%	1%	1%	1%	1%	2%	1%
WORK TIME FLEXIBILITY (workers only)								
	No flexibility	32%	34%	42%	39%	34%	35%	36%
	Some flexibility	31%	30%	30%	29%	29%	25%	29%
	Very flexible	33%	31%	25%	28%	31%	34%	30%
	Don't Know/Refused	4%	6%	3%	4%	6%	6%	5%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%

**Table D23. Demographic Profile of BATS2000 Residents by Proximity to Rail and Ferries (Row Percent)**

Demographic Characteristic	Proximity of Resident's Home to Rail Stations and Ferry Terminals						Total	
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile					
			Urban	High-Sub	Low-Sub	Rural		
AGE								
Average age	33.3	32.0	30.2	33.4	35.3	34.5	33.2	
17 and under	9%	12%	21%	22%	29%	7%	100%	
18 - 64	12%	15%	18%	21%	28%	6%	100%	
65 and over	8%	11%	13%	24%	37%	7%	100%	
Unknown age	8%	14%	22%	19%	34%	4%	100%	
DISABILITY STATUS								
Disabled	11%	14%	22%	25%	22%	6%	100%	
Not Disabled	11%	14%	19%	21%	29%	6%	100%	
GENDER								
Male	11%	14%	19%	21%	29%	7%	100%	
Female	11%	14%	19%	22%	29%	6%	100%	
RACE / ETHNICITY								
White	9%	12%	12%	22%	37%	8%	100%	
Hispanic/Latino	11%	18%	26%	22%	16%	7%	100%	
Black/African American	12%	19%	32%	16%	18%	3%	100%	
Asian/Pacific Islander	14%	15%	28%	19%	22%	3%	100%	
Other	9%	13%	19%	23%	30%	6%	100%	
DRIVER'S LICENSE STATUS BY AGE GROUP (excluding persons not reporting age)								
17 and under	Licensed	5%	9%	15%	20%	40%	10%	100%
	Unlicensed	9%	13%	21%	22%	29%	7%	100%
18 - 64	Licensed	11%	14%	18%	21%	29%	6%	100%
	Unlicensed	20%	22%	23%	19%	14%	2%	100%
65 and over	Licensed	7%	10%	10%	23%	41%	8%	100%
	Unlicensed	12%	15%	22%	27%	21%	3%	100%
EMPLOYMENT STATUS BY AGE GROUP (excluding persons not reporting age)								
17 and under	Employed	5%	12%	14%	22%	40%	7%	100%
	Not Employed	9%	12%	21%	22%	29%	7%	100%
18 - 64	Employed	12%	15%	18%	21%	28%	6%	100%
	Not Employed	11%	15%	19%	20%	28%	7%	100%
65 and over	Employed	9%	11%	11%	21%	39%	8%	100%
	Not Employed	8%	11%	13%	25%	37%	7%	100%
NUMBER OF JOBS (workers only)								
One	12%	15%	18%	21%	29%	6%	100%	
Two or more	13%	15%	17%	21%	28%	7%	100%	
WORK STATUS (workers only)								
Full-time	12%	15%	19%	21%	28%	6%	100%	
Part-time	11%	13%	15%	22%	32%	7%	100%	
Occasional	14%	17%	12%	22%	26%	8%	100%	
WORK TIME FLEXIBILITY (workers only)								
No flexibility	10%	14%	21%	23%	27%	6%	100%	
Some flexibility	12%	15%	18%	21%	29%	5%	100%	
Very flexible	13%	15%	15%	20%	30%	7%	100%	
Don't Know/Refused	11%	17%	11%	19%	35%	7%	100%	
TOTAL	11%	14%	19%	21%	29%	6%	100%	



---

## APPENDIX E

---

### TRAVEL CHARACTERISTICS, WALKABLE BUFFERS

---

Table E1.	BATS2000 Mode Shares by Trip Purpose and Proximity to Rail and Ferries.....	E-1
Table E2.	BATS2000 Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries.....	E-3
Table E3.	BATS2000 SAMPLE Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries .....	E-5
Table E4.	BATS2000 SAMPLE Trip Makers by Purpose and Proximity to Rail/Ferries.....	E-7
Table E5.	BATS2000 Mode Shares by Trip Purpose - Households Within 1/2 Mile and Greater than 1/2 Mile of Rail/Ferry Stops .....	E-8
Table E6.	BATS2000 Household Trip Rates by Proximity to Rail and Ferries.....	E-10
Table E7.	BATS2000 Per Capita Trip Rates by Proximity to Rail and Ferries .....	E-10
Table E8.	Zone-to-Zone VMT per Trip by Proximity to Rail and Ferry Stations .....	E-11
Table E9.	BATS2000 Travel Characteristics for Short Trips (1 mile or less) by Proximity to Rail and Ferries .....	E-12
Table E10.	BATS2000 Station Area Households by Proximity to Rail and Ferry by Population Density .....	E-13
Table E11.	Work, Non-Work, and Total Mode Shares for Station Area Residents by Proximity to Rail/Ferries and Density.....	E-14
Table E12.	Work, Non-Work, and Total Trips for Station Area Residents by Proximity to Rail/Ferries and Density.....	E-15
Table E13.	Work, Non-Work, and Total SAMPLE Trips for Station Area Residents by Proximity to Rail/Ferries and Density.....	E-16
Table E14.	Work, Non-Work, and Total SAMPLE Trip Makers for Station Area Residents by Proximity to Rail/Ferries and Density .....	E-17
Table E15.	BATS2000 Station Area Residents' Household Trip Rates and Transit Use by Proximity to Rail/Ferries and Density.....	E-18
Table E16.	BATS2000 Station Area Residents' Per Capita Trip Rates and Transit Use by Proximity to Rail/Ferries and Density.....	E-19



**Table E1. BATS2000 Mode Shares by Trip Purpose and Proximity to Rail and Ferries**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
MODE SHARES							
Home-Based Work							
In-Vehicle Person	52.6%	75.1%	81.7%	89.8%	88.8%	94.0%	81.7%
Vehicle Driver	45.9%	65.7%	74.0%	83.1%	83.6%	88.6%	74.9%
Vehicle Passenger	6.7%	9.3%	7.7%	6.7%	5.3%	5.5%	6.8%
Total Transit	29.4%	16.5%	13.2%	7.1%	7.2%	4.1%	12.2%
Rail and Ferry	15.8%	11.3%	6.7%	4.1%	5.3%	3.4%	7.3%
Bus	13.6%	5.2%	6.5%	3.0%	2.0%	0.8%	4.8%
Bicycle	4.1%	2.8%	0.8%	1.1%	1.6%	0.5%	1.8%
Walk	12.0%	4.3%	2.5%	1.6%	1.8%	1.2%	3.4%
Other	1.8%	1.3%	1.8%	0.3%	0.5%	0.2%	1.0%
Non-Work Trips							
In-Vehicle Person	56.1%	74.0%	74.5%	84.5%	87.0%	88.9%	79.5%
Vehicle Driver	35.0%	47.4%	44.7%	52.0%	56.3%	57.1%	50.0%
Vehicle Passenger	21.1%	26.6%	29.9%	32.4%	30.7%	31.8%	29.5%
Total Transit	16.0%	5.7%	5.4%	2.2%	1.8%	1.2%	4.4%
Rail and Ferry	4.9%	2.8%	1.6%	0.7%	1.0%	0.2%	1.6%
Bus	11.1%	2.9%	3.8%	1.5%	0.8%	0.9%	2.8%
Bicycle	2.1%	2.1%	1.3%	1.1%	1.3%	0.6%	1.4%
Walk	22.7%	16.7%	14.8%	9.8%	8.6%	5.8%	12.3%
Other	3.1%	1.5%	4.0%	2.4%	1.4%	3.5%	2.4%
Total Trips							
In-Vehicle Person	55.3%	74.3%	76.2%	85.6%	87.4%	89.9%	80.0%
Vehicle Driver	37.6%	52.0%	51.6%	58.8%	61.7%	63.2%	55.5%
Vehicle Passenger	17.7%	22.3%	24.6%	26.8%	25.7%	26.7%	24.5%
Total Transit	19.2%	8.4%	7.2%	3.3%	2.8%	1.7%	6.2%
Rail and Ferry	7.5%	5.0%	2.8%	1.5%	1.8%	0.9%	2.9%
Bus	11.7%	3.5%	4.4%	1.8%	1.0%	0.9%	3.3%
Bicycle	2.6%	2.3%	1.2%	1.1%	1.3%	0.6%	1.5%
Walk	20.1%	13.6%	11.9%	8.0%	7.2%	4.9%	10.3%
Other	2.8%	1.5%	3.5%	1.9%	1.2%	2.9%	2.1%

**Table E1. BATS2000 Mode Shares by Trip Purpose and Proximity to Rail and Ferries  
(continued)**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
<i>Home-Based Shop/Other</i>							<i>1</i>
<b>In-Vehicle Person</b>	<b>62.5%</b>	<b>76.9%</b>	<b>79.8%</b>	<b>87.3%</b>	<b>89.5%</b>	<b>91.0%</b>	<b>83.3%</b>
Vehicle Driver	46.7%	56.8%	55.1%	63.6%	67.1%	68.3%	61.1%
Vehicle Passenger	15.8%	20.1%	24.7%	23.7%	22.3%	22.7%	22.2%
<b>Total Transit</b>	<b>13.4%</b>	<b>4.6%</b>	<b>4.1%</b>	<b>2.3%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>3.3%</b>
Rail and Ferry	4.2%	2.0%	1.0%	0.5%	0.3%	0.1%	1.0%
Bus	9.2%	2.5%	3.1%	1.8%	0.4%	0.5%	2.2%
<b>Bicycle</b>	<b>3.2%</b>	<b>1.9%</b>	<b>1.1%</b>	<b>1.3%</b>	<b>1.1%</b>	<b>0.6%</b>	<b>1.4%</b>
<b>Walk</b>	<b>18.8%</b>	<b>16.0%</b>	<b>11.9%</b>	<b>8.2%</b>	<b>8.2%</b>	<b>7.4%</b>	<b>10.7%</b>
<b>Other</b>	<b>2.1%</b>	<b>0.6%</b>	<b>3.1%</b>	<b>0.9%</b>	<b>0.6%</b>	<b>0.5%</b>	<b>1.2%</b>
<i>Home-Based Social/Rec.</i>							<i>1</i>
<b>In-Vehicle Person</b>	<b>54.8%</b>	<b>78.1%</b>	<b>77.6%</b>	<b>88.2%</b>	<b>90.5%</b>	<b>92.4%</b>	<b>82.5%</b>
Vehicle Driver	31.1%	45.1%	43.1%	47.4%	52.7%	52.6%	46.6%
Vehicle Passenger	23.8%	33.0%	34.5%	40.8%	37.8%	39.8%	35.9%
<b>Total Transit</b>	<b>13.9%</b>	<b>5.8%</b>	<b>4.8%</b>	<b>2.0%</b>	<b>1.9%</b>	<b>0.7%</b>	<b>4.1%</b>
Rail and Ferry	5.8%	3.7%	2.0%	1.0%	1.2%	0.5%	2.1%
Bus	8.2%	2.0%	2.8%	1.0%	0.7%	0.2%	2.1%
<b>Bicycle</b>	<b>2.1%</b>	<b>2.1%</b>	<b>2.5%</b>	<b>0.8%</b>	<b>1.3%</b>	<b>1.1%</b>	<b>1.5%</b>
<b>Walk</b>	<b>26.7%</b>	<b>13.3%</b>	<b>12.9%</b>	<b>8.0%</b>	<b>5.7%</b>	<b>5.0%</b>	<b>10.6%</b>
<b>Other</b>	<b>2.4%</b>	<b>0.8%</b>	<b>2.2%</b>	<b>1.0%</b>	<b>0.6%</b>	<b>0.8%</b>	<b>1.2%</b>
<i>Home-Based School</i>							
<b>In-Vehicle Person</b>	<b>48.6%</b>	<b>59.1%</b>	<b>59.5%</b>	<b>68.7%</b>	<b>74.7%</b>	<b>74.8%</b>	<b>65.6%</b>
Vehicle Driver	14.4%	14.2%	13.7%	16.6%	18.1%	19.6%	16.1%
Vehicle Passenger	34.2%	44.9%	45.8%	52.1%	56.6%	55.2%	49.5%
<b>Total Transit</b>	<b>32.8%</b>	<b>9.4%</b>	<b>9.5%</b>	<b>3.2%</b>	<b>3.2%</b>	<b>3.9%</b>	<b>8.4%</b>
Rail and Ferry	4.9%	2.8%	2.1%	0.7%	0.8%	0.1%	1.7%
Bus	27.9%	6.6%	7.5%	2.6%	2.4%	3.9%	6.8%
<b>Bicycle</b>	<b>0.7%</b>	<b>1.4%</b>	<b>0.6%</b>	<b>2.4%</b>	<b>2.6%</b>	<b>0.3%</b>	<b>1.7%</b>
<b>Walk</b>	<b>9.7%</b>	<b>25.6%</b>	<b>23.0%</b>	<b>16.9%</b>	<b>14.1%</b>	<b>3.6%</b>	<b>16.8%</b>
<b>Other</b>	<b>8.2%</b>	<b>4.6%</b>	<b>7.3%</b>	<b>8.8%</b>	<b>5.4%</b>	<b>17.4%</b>	<b>7.5%</b>
<i>Non-Home-Based</i>							
<b>In-Vehicle Person</b>	<b>55.4%</b>	<b>75.2%</b>	<b>76.4%</b>	<b>87.4%</b>	<b>87.5%</b>	<b>91.5%</b>	<b>80.5%</b>
Vehicle Driver	38.1%	55.1%	54.9%	63.2%	65.0%	68.0%	58.7%
Vehicle Passenger	17.3%	20.1%	21.4%	24.2%	22.5%	23.4%	21.8%
<b>Total Transit</b>	<b>11.4%</b>	<b>5.1%</b>	<b>4.4%</b>	<b>1.7%</b>	<b>2.2%</b>	<b>0.8%</b>	<b>3.8%</b>
Rail and Ferry	4.8%	3.0%	1.6%	0.9%	1.6%	0.3%	1.9%
Bus	6.7%	2.0%	2.8%	0.8%	0.6%	0.4%	1.9%
<b>Bicycle</b>	<b>1.8%</b>	<b>2.6%</b>	<b>1.1%</b>	<b>0.4%</b>	<b>0.7%</b>	<b>0.3%</b>	<b>1.1%</b>
<b>Walk</b>	<b>29.6%</b>	<b>15.5%</b>	<b>14.0%</b>	<b>9.2%</b>	<b>8.7%</b>	<b>6.0%</b>	<b>12.8%</b>
<b>Other</b>	<b>1.9%</b>	<b>1.6%</b>	<b>4.2%</b>	<b>1.4%</b>	<b>0.9%</b>	<b>1.5%</b>	<b>1.8%</b>

**Table E2. BATS2000 Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
WEIGHTED TRIPS							
Home-Based Work							
In-Vehicle Person	282,448	514,385	715,994	881,561	1,123,222	239,487	3,757,097
Vehicle Driver	246,558	450,415	648,485	815,848	1,056,447	225,602	3,443,355
Vehicle Passenger	35,890	63,970	67,509	65,713	66,775	13,885	313,742
Total Transit	157,934	113,067	115,848	69,918	91,581	10,504	558,854
Rail and Ferry	84,709	77,690	58,843	40,042	66,781	8,554	336,619
Bus	73,226	35,377	57,005	29,877	24,800	1,950	222,235
Bicycle	22,047	19,239	7,253	10,762	20,653	1,156	81,109
Walk	64,611	29,733	21,784	16,014	22,791	3,168	158,101
Other	9,847	8,670	15,359	3,233	6,155	451	43,714
Total	536,887	685,094	876,237	981,488	1,264,403	254,765	4,598,874
Non-Work Trips							
In-Vehicle Person	956,545	1,510,972	2,114,083	2,948,070	4,427,012	931,130	12,887,812
Vehicle Driver	596,730	967,654	1,266,917	1,815,671	2,863,219	597,639	8,107,829
Vehicle Passenger	359,816	543,319	847,166	1,132,398	1,563,794	333,491	4,779,983
Total Transit	272,569	116,087	152,316	78,192	89,368	12,204	720,736
Rail and Ferry	82,879	57,337	44,641	25,863	48,502	2,585	261,807
Bus	189,690	58,749	107,676	52,329	40,866	9,619	458,929
Bicycle	35,212	42,471	36,957	38,492	63,668	6,052	222,852
Walk	386,690	340,691	419,608	343,369	436,861	61,114	1,988,332
Other	52,551	31,350	113,046	82,470	69,702	36,704	385,823
Total	1,703,568	2,041,570	2,836,010	3,490,593	5,086,612	1,047,203	16,205,555
Total Trips							
In-Vehicle Person	1,238,993	2,025,357	2,830,077	3,829,630	5,550,235	1,170,617	16,644,909
Vehicle Driver	843,288	1,418,068	1,915,402	2,631,519	3,919,666	823,241	11,551,184
Vehicle Passenger	395,706	607,289	914,675	1,198,111	1,630,569	347,376	5,093,726
Total Transit	430,503	229,154	268,165	148,111	180,949	22,707	1,279,589
Rail and Ferry	167,587	135,027	103,484	65,905	115,283	11,139	598,425
Bus	262,916	94,126	164,681	82,206	65,666	11,569	681,164
Bicycle	57,260	61,709	44,209	49,254	84,322	7,208	303,961
Walk	451,301	370,423	441,392	359,383	459,652	64,281	2,146,433
Other	62,398	40,020	128,405	85,702	75,857	37,155	429,537
Total	2,240,455	2,726,664	3,712,247	4,472,080	6,351,015	1,301,968	20,804,429

**Table E2. BATS2000 Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries  
(continued)**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
<i>Home-Based Shop/Other</i>							
<b>In-Vehicle Person</b>	<b>297,563</b>	<b>518,274</b>	<b>768,695</b>	<b>1,008,915</b>	<b>1,560,077</b>	<b>302,026</b>	<b>4,455,550</b>
Vehicle Driver	222,524	382,551	531,020	734,977	1,171,094	226,576	3,268,741
Vehicle Passenger	75,039	135,723	237,676	273,938	388,983	75,451	1,186,809
<b>Total Transit</b>	<b>63,801</b>	<b>30,730</b>	<b>39,538</b>	<b>27,138</b>	<b>12,024</b>	<b>1,832</b>	<b>175,063</b>
Rail and Ferry	20,026	13,584	9,550	5,929	5,873	314	55,275
Bus	43,775	17,147	29,988	21,209	6,150	1,518	119,787
<b>Bicycle</b>	<b>15,020</b>	<b>12,731</b>	<b>10,883</b>	<b>14,956</b>	<b>19,771</b>	<b>1,968</b>	<b>75,328</b>
<b>Walk</b>	<b>89,652</b>	<b>107,725</b>	<b>114,987</b>	<b>94,539</b>	<b>142,344</b>	<b>24,452</b>	<b>573,699</b>
<b>Other</b>	<b>10,098</b>	<b>4,279</b>	<b>29,424</b>	<b>10,745</b>	<b>9,831</b>	<b>1,590</b>	<b>65,967</b>
<b>Total</b>	<b>476,134</b>	<b>673,739</b>	<b>963,528</b>	<b>1,156,293</b>	<b>1,744,045</b>	<b>331,868</b>	<b>5,345,607</b>
<i>Home-Based Social/Rec.</i>							
<b>In-Vehicle Person</b>	<b>223,388</b>	<b>349,013</b>	<b>450,274</b>	<b>709,183</b>	<b>1,042,325</b>	<b>214,382</b>	<b>2,988,566</b>
Vehicle Driver	126,563	201,641	249,897	380,947	606,507	121,931	1,687,486
Vehicle Passenger	96,825	147,373	200,377	328,236	435,818	92,451	1,301,080
<b>Total Transit</b>	<b>56,782</b>	<b>25,746</b>	<b>28,140</b>	<b>16,368</b>	<b>21,776</b>	<b>1,513</b>	<b>150,325</b>
Rail and Ferry	23,425	16,597	11,639	7,978	13,764	1,097	74,499
Bus	33,357	9,149	16,501	8,390	8,012	416	75,825
<b>Bicycle</b>	<b>8,507</b>	<b>9,174</b>	<b>14,600</b>	<b>6,102</b>	<b>14,796</b>	<b>2,594</b>	<b>55,772</b>
<b>Walk</b>	<b>108,874</b>	<b>59,490</b>	<b>74,731</b>	<b>64,456</b>	<b>65,453</b>	<b>11,716</b>	<b>384,721</b>
<b>Other</b>	<b>9,785</b>	<b>3,538</b>	<b>12,728</b>	<b>8,046</b>	<b>7,167</b>	<b>1,813</b>	<b>43,077</b>
<b>Total</b>	<b>407,337</b>	<b>446,961</b>	<b>580,474</b>	<b>804,154</b>	<b>1,151,517</b>	<b>232,018</b>	<b>3,622,461</b>
<i>Home-Based School</i>							
<b>In-Vehicle Person</b>	<b>132,759</b>	<b>179,267</b>	<b>322,828</b>	<b>394,372</b>	<b>539,473</b>	<b>123,050</b>	<b>1,691,748</b>
Vehicle Driver	39,359	43,117	74,220	95,500	130,705	32,225	415,126
Vehicle Passenger	93,400	136,150	248,608	298,872	408,768	90,825	1,276,622
<b>Total Transit</b>	<b>89,583</b>	<b>28,410</b>	<b>51,761</b>	<b>18,555</b>	<b>23,186</b>	<b>6,427</b>	<b>217,922</b>
Rail and Ferry	13,409	8,425	11,265	3,797	5,954	86	42,935
Bus	76,174	19,985	40,496	14,758	17,232	6,341	174,987
<b>Bicycle</b>	<b>1,996</b>	<b>4,298</b>	<b>3,497</b>	<b>13,623</b>	<b>18,837</b>	<b>438</b>	<b>42,688</b>
<b>Walk</b>	<b>26,422</b>	<b>77,603</b>	<b>124,765</b>	<b>96,815</b>	<b>101,783</b>	<b>5,885</b>	<b>433,273</b>
<b>Other</b>	<b>22,327</b>	<b>13,811</b>	<b>39,708</b>	<b>50,297</b>	<b>38,856</b>	<b>28,625</b>	<b>193,623</b>
<b>Total</b>	<b>273,086</b>	<b>303,389</b>	<b>542,559</b>	<b>573,662</b>	<b>722,134</b>	<b>164,425</b>	<b>2,579,254</b>
<i>Non-Home-Based</i>							
<b>In-Vehicle Person</b>	<b>302,835</b>	<b>464,419</b>	<b>572,285</b>	<b>835,600</b>	<b>1,285,138</b>	<b>291,671</b>	<b>3,751,949</b>
Vehicle Driver	208,283	340,346	411,780	604,248	954,913	216,907	2,736,476
Vehicle Passenger	94,552	124,073	160,505	231,353	330,225	74,765	1,015,473
<b>Total Transit</b>	<b>62,403</b>	<b>31,201</b>	<b>32,877</b>	<b>16,132</b>	<b>32,383</b>	<b>2,432</b>	<b>177,426</b>
Rail and Ferry	26,019	18,732	12,186	8,161	22,910	1,088	89,096
Bus	36,384	12,468	20,690	7,971	9,472	1,344	88,330
<b>Bicycle</b>	<b>9,690</b>	<b>16,268</b>	<b>7,978</b>	<b>3,811</b>	<b>10,265</b>	<b>1,052</b>	<b>49,064</b>
<b>Walk</b>	<b>161,742</b>	<b>95,872</b>	<b>105,124</b>	<b>87,559</b>	<b>127,281</b>	<b>19,061</b>	<b>596,639</b>
<b>Other</b>	<b>10,341</b>	<b>9,721</b>	<b>31,186</b>	<b>13,381</b>	<b>13,849</b>	<b>4,676</b>	<b>83,155</b>
<b>Total</b>	<b>547,011</b>	<b>617,481</b>	<b>749,449</b>	<b>956,484</b>	<b>1,468,915</b>	<b>318,892</b>	<b>4,658,233</b>

**Table E3. BATS2000 SAMPLE Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
SAMPLE TRIPS							
Home-Based Work							
In-Vehicle Person	2,375	4,608	5,201	9,032	13,767	2,872	37,855
Vehicle Driver	2,174	4,242	4,866	8,557	13,025	2,710	35,574
Vehicle Passenger	201	366	335	475	742	162	2,281
Total Transit	987	828	732	529	1,048	109	4,233
Rail and Ferry	663	579	431	365	775	81	2,894
Bus	324	249	301	164	273	28	1,339
Bicycle	127	178	93	134	190	11	733
Walk	325	337	144	177	258	36	1,277
Other	69	62	70	44	67	9	321
Total	3,883	6,013	6,240	9,916	15,330	3,037	44,419
Non-Work Trips							
In-Vehicle Person	7,644	14,703	15,059	30,685	53,245	11,636	132,972
Vehicle Driver	5,433	10,375	10,417	21,000	36,823	8,130	92,178
Vehicle Passenger	2,211	4,328	4,642	9,685	16,422	3,506	40,794
Total Transit	1,147	730	728	540	778	96	4,019
Rail and Ferry	559	408	279	278	451	50	2,025
Bus	588	322	449	262	327	46	1,994
Bicycle	302	393	280	365	582	68	1,990
Walk	2,848	2,798	2,317	2,826	4,338	634	15,761
Other	243	228	306	434	694	252	2,157
Total	12,184	18,852	18,690	34,850	59,637	12,686	156,899
Total Trips							
In-Vehicle Person	10,019	19,311	20,260	39,717	67,012	14,508	170,827
Vehicle Driver	7,607	14,617	15,283	29,557	49,848	10,840	127,752
Vehicle Passenger	2,412	4,694	4,977	10,160	17,164	3,668	43,075
Total Transit	2,134	1,558	1,460	1,069	1,826	205	8,252
Rail and Ferry	1,222	987	710	643	1,226	131	4,919
Bus	912	571	750	426	600	74	3,333
Bicycle	429	571	373	499	772	79	2,723
Walk	3,173	3,135	2,461	3,003	4,596	670	17,038
Other	312	290	376	478	761	261	2,478
Total	16,067	24,865	24,930	44,766	74,967	15,723	201,318

**Table E3. BATS2000 Sample Trips by Mode, Trip Purpose, and Proximity to Rail and Ferries (continued)**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
<i>Home-Based Shop/Other</i>							
<b>In-Vehicle Person</b>	<b>2,473</b>	<b>4,868</b>	<b>5,243</b>	<b>10,585</b>	<b>18,629</b>	<b>3,785</b>	<b>45,583</b>
Vehicle Driver	1,974	3,845	3,997	8,270	14,617	2,981	35,684
Vehicle Passenger	499	1,023	1,246	2,315	4,012	804	9,899
<b>Total Transit</b>	<b>254</b>	<b>185</b>	<b>178</b>	<b>137</b>	<b>115</b>	<b>18</b>	<b>887</b>
Rail and Ferry	111	89	51	45	59	8	363
Bus	143	96	127	92	56	10	524
<b>Bicycle</b>	<b>112</b>	<b>128</b>	<b>99</b>	<b>134</b>	<b>211</b>	<b>18</b>	<b>702</b>
<b>Walk</b>	<b>818</b>	<b>811</b>	<b>678</b>	<b>825</b>	<b>1,443</b>	<b>205</b>	<b>4,780</b>
<b>Other</b>	<b>52</b>	<b>42</b>	<b>70</b>	<b>68</b>	<b>103</b>	<b>23</b>	<b>358</b>
<b>Total</b>	<b>3,709</b>	<b>6,034</b>	<b>6,268</b>	<b>11,749</b>	<b>20,501</b>	<b>4,049</b>	<b>52,310</b>
<i>Home-Based Social/Rec.</i>							
<b>In-Vehicle Person</b>	<b>1,798</b>	<b>3,734</b>	<b>3,457</b>	<b>7,301</b>	<b>12,791</b>	<b>2,691</b>	<b>31,772</b>
Vehicle Driver	1,188	2,373	2,247	4,531	8,098	1,658	20,095
Vehicle Passenger	610	1,361	1,210	2,770	4,693	1,033	11,677
<b>Total Transit</b>	<b>364</b>	<b>187</b>	<b>177</b>	<b>149</b>	<b>190</b>	<b>26</b>	<b>1,093</b>
Rail and Ferry	190	117	91	98	141	21	658
Bus	174	70	86	51	49	5	435
<b>Bicycle</b>	<b>72</b>	<b>93</b>	<b>75</b>	<b>86</b>	<b>153</b>	<b>30</b>	<b>509</b>
<b>Walk</b>	<b>647</b>	<b>579</b>	<b>430</b>	<b>491</b>	<b>741</b>	<b>117</b>	<b>3,005</b>
<b>Other</b>	<b>55</b>	<b>37</b>	<b>41</b>	<b>49</b>	<b>96</b>	<b>26</b>	<b>304</b>
<b>Total</b>	<b>2,936</b>	<b>4,630</b>	<b>4,180</b>	<b>8,076</b>	<b>13,971</b>	<b>2,890</b>	<b>36,683</b>
<i>Home-Based School</i>							
<b>In-Vehicle Person</b>	<b>701</b>	<b>1,214</b>	<b>1,625</b>	<b>3,481</b>	<b>5,444</b>	<b>1,155</b>	<b>13,620</b>
Vehicle Driver	208	361	463	985	1,490	357	3,864
Vehicle Passenger	493	853	1,162	2,496	3,954	798	9,756
<b>Total Transit</b>	<b>154</b>	<b>115</b>	<b>160</b>	<b>97</b>	<b>171</b>	<b>21</b>	<b>718</b>
Rail and Ferry	62	49	40	33	41	2	227
Bus	92	66	120	64	130	19	491
<b>Bicycle</b>	<b>24</b>	<b>48</b>	<b>49</b>	<b>96</b>	<b>143</b>	<b>5</b>	<b>365</b>
<b>Walk</b>	<b>143</b>	<b>387</b>	<b>429</b>	<b>625</b>	<b>808</b>	<b>49</b>	<b>2,441</b>
<b>Other</b>	<b>64</b>	<b>84</b>	<b>96</b>	<b>219</b>	<b>339</b>	<b>159</b>	<b>961</b>
<b>Total</b>	<b>1,086</b>	<b>1,848</b>	<b>2,359</b>	<b>4,518</b>	<b>6,905</b>	<b>1,389</b>	<b>18,105</b>
<i>Non-Home-Based</i>							
<b>In-Vehicle Person</b>	<b>2,672</b>	<b>4,887</b>	<b>4,734</b>	<b>9,318</b>	<b>16,381</b>	<b>4,005</b>	<b>41,997</b>
Vehicle Driver	2,063	3,796	3,710	7,214	12,618	3,134	32,535
Vehicle Passenger	609	1,091	1,024	2,104	3,763	871	9,462
<b>Total Transit</b>	<b>375</b>	<b>243</b>	<b>213</b>	<b>157</b>	<b>302</b>	<b>31</b>	<b>1,321</b>
Rail and Ferry	196	153	97	102	210	19	777
Bus	179	90	116	55	92	12	544
<b>Bicycle</b>	<b>94</b>	<b>124</b>	<b>57</b>	<b>49</b>	<b>75</b>	<b>15</b>	<b>414</b>
<b>Walk</b>	<b>1,240</b>	<b>1,021</b>	<b>780</b>	<b>885</b>	<b>1,346</b>	<b>263</b>	<b>5,535</b>
<b>Other</b>	<b>72</b>	<b>65</b>	<b>99</b>	<b>98</b>	<b>156</b>	<b>44</b>	<b>534</b>
<b>Total</b>	<b>4,453</b>	<b>6,340</b>	<b>5,883</b>	<b>10,507</b>	<b>18,260</b>	<b>4,358</b>	<b>49,801</b>



**Table E4. BATS2000 SAMPLE Trip Makers by Purpose and Proximity to Rail and Ferries**

Trip Purpose	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
SAMPLE PERSONS							
Home-Based Work	1,448	2,174	2,262	3,564	5,561	1,158	16,167
Non-Work Trips	2,132	3,379	3,560	6,251	10,539	2,268	28,129
Total Trips	2,432	3,895	4,171	7,111	11,768	2,551	31,928
Home-Based Shop/Other	1,411	2,239	2,300	4,149	7,212	1,530	18,841
Home-Based Social/Rec.	1,256	1,942	1,873	3,423	5,920	1,249	15,663
Home-Based School	397	710	866	1,613	2,499	514	6,599
Non-Home-Based	1,472	2,270	2,227	3,990	6,825	1,475	18,259

*Note: The tally of sample persons in this table sums tripmakers only once by trip purpose regardless of the number of trips the person made. Additionally, there is overlap between purposes when tallying the number of trip makers (residents who made home-based work trips also made non-work trips). For example, if a person made 2 home-based work trips, 3 home-based shop trips, 2 home-based social/recreational trips, 1 home-based school trip, and 5 non-home-based trips, s/he was counted as a tripmaker once in the home-based work category, once in the social/recreational category, once in the shop category, once in the non-home-based category, once in the non-work category, and once in the total trips category.*

**Table E5. BATS2000 Mode Shares by Trip Purpose - Households Within 1/2 Mile and Greater than 1/2 Mile of Rail/Ferry Stops**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals		Total
	Within 1/2 mile	Greater than 1/2 mile	
<b>MODE SHARES</b>			
<i>Home-Based Work</i>			
<b>In-Vehicle Person</b>	<b>52.6%</b>	<b>85.5%</b>	<b>83.5%</b>
Vehicle Driver	45.9%	78.7%	76.7%
Vehicle Passenger	6.7%	6.8%	6.8%
<b>Total Transit</b>	<b>29.4%</b>	<b>9.9%</b>	<b>11.1%</b>
Rail and Ferry	15.8%	6.2%	6.8%
Bus	13.6%	3.7%	4.3%
<b>Bicycle</b>	<b>4.1%</b>	<b>1.5%</b>	<b>1.6%</b>
<b>Walk</b>	<b>12.0%</b>	<b>2.3%</b>	<b>2.9%</b>
<b>Other</b>	<b>1.8%</b>	<b>0.8%</b>	<b>0.9%</b>
<i>Non-Work Trips</i>			
<b>In-Vehicle Person</b>	<b>56.1%</b>	<b>82.3%</b>	<b>80.8%</b>
Vehicle Driver	35.0%	51.8%	50.9%
Vehicle Passenger	21.1%	30.5%	30.0%
<b>Total Transit</b>	<b>16.0%</b>	<b>3.1%</b>	<b>3.8%</b>
Rail and Ferry	4.9%	1.2%	1.4%
Bus	11.1%	1.9%	2.4%
<b>Bicycle</b>	<b>2.1%</b>	<b>1.3%</b>	<b>1.3%</b>
<b>Walk</b>	<b>22.7%</b>	<b>11.0%</b>	<b>11.7%</b>
<b>Other</b>	<b>3.1%</b>	<b>2.3%</b>	<b>2.3%</b>
<i>Total Trips</i>			
<b>In-Vehicle Person</b>	<b>55.3%</b>	<b>83.0%</b>	<b>81.4%</b>
Vehicle Driver	37.6%	57.7%	56.5%
Vehicle Passenger	17.7%	25.3%	24.9%
<b>Total Transit</b>	<b>19.2%</b>	<b>4.6%</b>	<b>5.4%</b>
Rail and Ferry	7.5%	2.3%	2.6%
Bus	11.7%	2.3%	2.8%
<b>Bicycle</b>	<b>2.6%</b>	<b>1.3%</b>	<b>1.4%</b>
<b>Walk</b>	<b>20.1%</b>	<b>9.1%</b>	<b>9.8%</b>
<b>Other</b>	<b>2.8%</b>	<b>2.0%</b>	<b>2.0%</b>

**Table E5. BATS2000 Mode Shares by Trip Purpose - Households Within 1/2 Mile and Greater than 1/2 Mile of Rail/Ferry Stops (continued)**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals		Total
	Within 1/2 mile	Greater than 1/2 mile	
<i>Home-Based Shop/Other</i>			
<b>In-Vehicle Person</b>	<b>62.5%</b>	<b>85.4%</b>	<b>84.3%</b>
Vehicle Driver	46.7%	62.6%	61.8%
Vehicle Passenger	15.8%	22.8%	22.5%
<b>Total Transit</b>	<b>13.4%</b>	<b>2.3%</b>	<b>2.8%</b>
Rail and Ferry	4.2%	0.7%	0.9%
Bus	9.2%	1.6%	1.9%
<b>Bicycle</b>	<b>3.2%</b>	<b>1.2%</b>	<b>1.3%</b>
<b>Walk</b>	<b>18.8%</b>	<b>9.9%</b>	<b>10.4%</b>
<b>Other</b>	<b>2.1%</b>	<b>1.1%</b>	<b>1.2%</b>
<i>Home-Based Social/Rec.</i>			
<b>In-Vehicle Person</b>	<b>54.8%</b>	<b>86.0%</b>	<b>84.1%</b>
Vehicle Driver	31.1%	48.5%	47.5%
Vehicle Passenger	23.8%	37.5%	36.6%
<b>Total Transit</b>	<b>13.9%</b>	<b>2.9%</b>	<b>3.6%</b>
Rail and Ferry	5.8%	1.6%	1.8%
Bus	8.2%	1.3%	1.7%
<b>Bicycle</b>	<b>2.1%</b>	<b>1.5%</b>	<b>1.5%</b>
<b>Walk</b>	<b>26.7%</b>	<b>8.6%</b>	<b>9.7%</b>
<b>Other</b>	<b>2.4%</b>	<b>1.0%</b>	<b>1.1%</b>
<i>Home-Based School</i>			
<b>In-Vehicle Person</b>	<b>48.6%</b>	<b>67.6%</b>	<b>66.5%</b>
Vehicle Driver	14.4%	16.3%	16.2%
Vehicle Passenger	34.2%	51.3%	50.4%
<b>Total Transit</b>	<b>32.8%</b>	<b>5.6%</b>	<b>7.1%</b>
Rail and Ferry	4.9%	1.3%	1.5%
Bus	27.9%	4.3%	5.6%
<b>Bicycle</b>	<b>0.7%</b>	<b>1.8%</b>	<b>1.7%</b>
<b>Walk</b>	<b>9.7%</b>	<b>17.6%</b>	<b>17.2%</b>
<b>Other</b>	<b>8.2%</b>	<b>7.4%</b>	<b>7.5%</b>
<i>Non-Home-Based</i>			
<b>In-Vehicle Person</b>	<b>55.4%</b>	<b>83.9%</b>	<b>82.1%</b>
Vehicle Driver	38.1%	61.5%	60.0%
Vehicle Passenger	17.3%	22.4%	22.1%
<b>Total Transit</b>	<b>11.4%</b>	<b>2.8%</b>	<b>3.3%</b>
Rail and Ferry	4.8%	1.5%	1.7%
Bus	6.7%	1.3%	1.6%
<b>Bicycle</b>	<b>1.8%</b>	<b>1.0%</b>	<b>1.0%</b>
<b>Walk</b>	<b>29.6%</b>	<b>10.6%</b>	<b>11.8%</b>
<b>Other</b>	<b>1.9%</b>	<b>1.8%</b>	<b>1.8%</b>

**Table E6. BATS2000 Household Trip Rates by Proximity to Rail and Ferries**

Travel Characteristic	Proximity of Household to Rail Station or Ferry Terminal						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
TRIP RATES							
Vehicle Driver Trips per Household	2.735	3.952	4.352	5.223	5.542	5.576	4.684
Transit Trips per Household	1.396	0.639	0.609	0.294	0.256	0.154	0.519
Bicycle Trips per Household	0.186	0.172	0.100	0.098	0.119	0.049	0.123
Walk Trips per Household	1.464	1.032	1.003	0.713	0.650	0.435	0.870
Total Trips per Household	7.266	7.598	8.435	8.876	8.980	8.819	8.436
TRANSIT USE							
Percent of Households Using Transit During Two-Day Survey Period	48.4%	28.8%	27.8%	15.0%	14.0%	6.8%	22.7%

**Table E7. BATS2000 Per Capita Trip Rates by Proximity to Rail and Ferries**

Travel Characteristic	Proximity of Household to Rail Station or Ferry Terminal						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
TRIP RATES							
Vehicle Driver Trips per Person	1.194	1.531	1.545	1.867	2.031	1.917	1.739
Transit Trips per Person	0.610	0.247	0.216	0.105	0.094	0.053	0.193
Bicycle Trips per Person	0.081	0.067	0.036	0.035	0.044	0.017	0.046
Walk Trips per Person	0.639	0.400	0.356	0.255	0.238	0.150	0.323
Total Trips per Person	3.173	2.943	2.995	3.173	3.291	3.032	3.133
TRANSIT USE							
Percent of Population Using Transit During Two-Day Survey Period	33.6%	14.7%	13.4%	7.2%	6.2%	3.2%	11.7%

**Table E8. Zone-to-Zone VMT per Trip by Proximity to Rail and Ferry Stations**

Proximity of Home to Rail Stations and Ferry Terminals	Valid Vehicle			Total Vehicle		Imputed Share	Estimated VMT per Household	Estimated VMT per Driver
	Valid VMT	Driver Trips	Average VMT/Trip	Driver Trips	Total Estimated VMT	of Total Estimated VMT		
Within 1/2 mile	5,495,898	748,675	7.34	843,288	6,190,434	11%	20.07	13.13
1/2 mile to 1 mile	9,037,888	1,265,932	7.14	1,418,068	10,124,035	11%	28.21	16.57
Greater than 1 mile - Urban	11,804,571	1,704,649	6.92	1,915,402	13,264,024	11%	30.14	17.51
Greater than 1 mile - High-Suburban	17,295,599	2,396,174	7.22	2,631,519	18,994,326	9%	37.70	20.73
Greater than 1 mile - Low-Suburban	28,170,739	3,532,244	7.98	3,919,666	31,260,544	10%	44.20	23.70
Greater than 1 mile - Rural	7,330,804	743,537	9.86	823,241	8,116,631	10%	54.98	28.12
Total	79,135,499	10,391,211	7.62	11,551,184	87,949,994	10%	35.66	20.15

Sources: Bay Area Travel Survey 2000 and MTC's Year 2000 Highway Network LOS Files

**Table E9. BATS2000 Travel Characteristics for Short Trips (1 mile or less) by Proximity to Rail and Ferries**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile	1/2 mile to 1 mile	Greater than 1 mile				
			Urban	High-Sub	Low-Sub	Rural	
MODE SHARES							
In-Vehicle Person	36.7%	57.0%	58.4%	72.4%	73.9%	77.2%	63.2%
Vehicle Driver	23.3%	36.4%	34.3%	44.4%	47.7%	53.1%	39.6%
Vehicle Passenger	13.4%	20.6%	24.2%	28.0%	26.1%	24.1%	23.6%
Total Transit	9.1%	2.1%	3.2%	0.8%	0.5%	0.1%	2.5%
Rail and Ferry	1.2%	0.5%	0.7%	0.0%	0.1%	0.0%	0.4%
Bus	7.9%	1.7%	2.6%	0.8%	0.4%	0.1%	2.1%
Bicycle	2.9%	3.5%	2.5%	2.2%	2.4%	1.6%	2.6%
Walk	49.5%	35.7%	33.6%	23.0%	22.2%	17.5%	30.1%
Other	1.8%	1.7%	2.3%	1.5%	1.1%	3.5%	1.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
WEIGHTED TRIPS							
In-Vehicle Person	254,328	438,861	563,174	802,635	1,049,971	124,857	3,233,825
Vehicle Driver	161,238	280,282	330,270	491,879	678,587	85,929	2,028,186
Vehicle Passenger	93,090	158,578	232,904	310,756	371,384	38,927	1,205,639
Total Transit	63,077	16,520	30,897	9,216	6,483	216	126,409
Rail and Ferry	8,508	3,715	6,313	486	1,480	43	20,545
Bus	54,569	12,805	24,584	8,730	5,003	173	105,864
Bicycle	20,342	26,732	24,014	24,502	34,296	2,654	132,540
Walk	342,701	274,803	323,859	255,450	314,996	28,320	1,540,129
Other	12,235	13,292	22,043	16,699	15,710	5,733	85,712
Total	692,682	770,208	963,987	1,108,502	1,421,456	161,779	5,118,614
SAMPLE TRIPS							
In-Vehicle Person	2,007	4,245	3,986	8,293	12,667	1,549	32,747
Vehicle Driver	1,442	3,029	2,755	5,618	8,898	1,114	22,856
Vehicle Passenger	565	1,216	1,231	2,675	3,769	435	9,891
Total Transit	212	116	142	62	59	4	595
Rail and Ferry	60	30	21	13	17	1	142
Bus	152	86	121	49	42	3	453
Bicycle	154	261	173	214	311	25	1,138
Walk	2,370	2,382	1,824	2,123	3,061	252	12,012
Other	72	85	77	119	159	33	545
Total	4,815	7,089	6,202	10,811	16,257	1,863	47,037

Sources: Bay Area Travel Survey 2000 and MTC's Year 2000 Highway Network LOS Files

**Table E10. BATS2000 Station Area Households by Proximity to Rail and Ferry by Population Density**

Proximity of Household to Rail and Ferry Stops	Density	Sample Households		Weighted Households	
		Number	Percent	Number	Percent
Within 1/2 mile	Urban	1,018	72.4%	241,443	78.3%
	High Suburban	249	17.7%	43,325	14.0%
	Low Suburban	129	9.2%	20,834	6.8%
	Rural	11	0.8%	2,764	0.9%
1/2 mile to 1 mile	Urban	1,046	52.4%	210,551	58.7%
	High Suburban	610	30.6%	97,998	27.3%
	Low Suburban	329	16.5%	48,865	13.6%
	Rural	10	0.5%	1,449	0.4%
Total		3,402	100.0%	667,228	100.0%

**Table E11. Work, Non-Work, and Total Mode Shares for Station Area Residents by Proximity to Rail/Ferries and Density**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile			1/2 mile to 1 mile			
	Urban	High-Sub	Low-Sub/ Rural	Urban	High-Sub	Low-Sub/ Rural	
MODE SHARES							
<i>Home-Based Work</i>							
<b>In-Vehicle Person</b>	<b>47.6%</b>	<b>75.6%</b>	<b>64.7%</b>	<b>71.0%</b>	<b>80.2%</b>	<b>80.4%</b>	<b>65.2%</b>
Vehicle Driver	40.8%	68.1%	61.0%	59.9%	72.8%	74.1%	57.0%
Vehicle Passenger	6.8%	7.5%	3.7%	11.2%	7.4%	6.3%	8.2%
<b>Total Transit</b>	<b>31.9%</b>	<b>20.4%</b>	<b>18.7%</b>	<b>19.7%</b>	<b>11.5%</b>	<b>14.2%</b>	<b>22.2%</b>
Rail and Ferry	15.8%	15.5%	16.2%	12.4%	8.8%	12.2%	13.3%
Bus	16.1%	4.9%	2.6%	7.2%	2.8%	2.0%	8.9%
<b>Bicycle</b>	<b>4.1%</b>	<b>0.9%</b>	<b>10.9%</b>	<b>3.5%</b>	<b>2.4%</b>	<b>0.9%</b>	<b>3.4%</b>
<b>Walk</b>	<b>14.5%</b>	<b>2.6%</b>	<b>2.4%</b>	<b>4.9%</b>	<b>3.4%</b>	<b>4.2%</b>	<b>7.7%</b>
<b>Other</b>	<b>1.9%</b>	<b>0.6%</b>	<b>3.3%</b>	<b>0.9%</b>	<b>2.5%</b>	<b>0.3%</b>	<b>1.5%</b>
<i>Non-Work Trips</i>							
<b>In-Vehicle Person</b>	<b>52.2%</b>	<b>73.6%</b>	<b>70.4%</b>	<b>67.7%</b>	<b>83.0%</b>	<b>80.0%</b>	<b>65.9%</b>
Vehicle Driver	32.0%	47.3%	48.6%	43.4%	54.3%	48.9%	41.8%
Vehicle Passenger	20.3%	26.2%	21.8%	24.3%	28.7%	31.1%	24.1%
<b>Total Transit</b>	<b>18.3%</b>	<b>7.0%</b>	<b>5.8%</b>	<b>8.2%</b>	<b>2.1%</b>	<b>3.5%</b>	<b>10.4%</b>
Rail and Ferry	5.0%	4.6%	4.1%	3.5%	1.3%	3.0%	3.7%
Bus	13.3%	2.4%	1.7%	4.6%	0.7%	0.5%	6.6%
<b>Bicycle</b>	<b>2.1%</b>	<b>1.2%</b>	<b>4.0%</b>	<b>2.3%</b>	<b>2.2%</b>	<b>1.0%</b>	<b>2.1%</b>
<b>Walk</b>	<b>24.1%</b>	<b>16.0%</b>	<b>18.3%</b>	<b>20.5%</b>	<b>10.6%</b>	<b>14.2%</b>	<b>19.4%</b>
<b>Other</b>	<b>3.4%</b>	<b>2.2%</b>	<b>1.5%</b>	<b>1.3%</b>	<b>2.1%</b>	<b>1.3%</b>	<b>2.2%</b>
<i>Total Trips</i>							
<b>In-Vehicle Person</b>	<b>51.1%</b>	<b>74.1%</b>	<b>69.0%</b>	<b>68.6%</b>	<b>82.3%</b>	<b>80.1%</b>	<b>65.7%</b>
Vehicle Driver	34.0%	52.5%	51.7%	47.6%	59.0%	55.0%	45.5%
Vehicle Passenger	17.1%	21.5%	17.3%	21.0%	23.3%	25.1%	20.2%
<b>Total Transit</b>	<b>21.5%</b>	<b>10.4%</b>	<b>9.1%</b>	<b>11.1%</b>	<b>4.5%</b>	<b>6.1%</b>	<b>13.3%</b>
Rail and Ferry	7.5%	7.3%	7.1%	5.8%	3.2%	5.2%	6.1%
Bus	14.0%	3.1%	1.9%	5.3%	1.2%	0.9%	7.2%
<b>Bicycle</b>	<b>2.5%</b>	<b>1.1%</b>	<b>5.7%</b>	<b>2.6%</b>	<b>2.2%</b>	<b>1.0%</b>	<b>2.4%</b>
<b>Walk</b>	<b>21.8%</b>	<b>12.6%</b>	<b>14.3%</b>	<b>16.6%</b>	<b>8.8%</b>	<b>11.8%</b>	<b>16.5%</b>
<b>Other</b>	<b>3.0%</b>	<b>1.8%</b>	<b>2.0%</b>	<b>1.2%</b>	<b>2.2%</b>	<b>1.0%</b>	<b>2.1%</b>

Source: Bay Area Travel Survey 2000



**Table E12. Work, Non-Work, and Total Trips for Station Area Residents by Proximity to Rail/Ferries and Density**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile			1/2 mile to 1 mile			
	Urban	High-Sub	Low-Sub/ Rural	Urban	High-Sub	Low-Sub/ Rural	
WEIGHTED TRIPS							
Home-Based Work							
In-Vehicle Person	202,732	54,968	24,748	272,897	159,610	81,878	796,833
Vehicle Driver	173,707	49,523	23,328	229,976	144,966	75,473	696,973
Vehicle Passenger	29,025	5,445	1,420	42,922	14,643	6,406	99,861
Total Transit	135,963	14,808	7,163	75,601	22,972	14,495	271,002
Rail and Ferry	67,277	11,247	6,184	47,778	17,498	12,413	162,399
Bus	68,686	3,561	979	27,822	5,474	2,082	108,603
Bicycle	17,274	620	4,153	13,560	4,733	946	41,286
Walk	61,786	1,894	932	18,761	6,725	4,248	94,344
Other	8,135	457	1,256	3,389	4,966	315	18,517
Total	425,889	72,747	38,251	384,207	199,004	101,882	1,221,981
Non-Work Trips							
In-Vehicle Person	716,504	160,476	79,565	770,961	485,452	254,559	2,467,518
Vehicle Driver	438,577	103,277	54,875	494,425	317,699	155,530	1,564,383
Vehicle Passenger	277,926	57,200	24,690	276,536	167,753	99,029	903,134
Total Transit	250,669	15,365	6,535	92,798	12,118	11,171	388,655
Rail and Ferry	68,220	10,050	4,609	40,027	7,859	9,451	140,216
Bus	182,449	5,316	1,926	52,770	4,259	1,720	248,439
Bicycle	28,178	2,537	4,498	26,396	12,809	3,266	77,683
Walk	331,061	34,900	20,728	233,279	62,208	45,203	727,381
Other	45,985	4,872	1,695	15,105	12,222	4,022	83,901
Total	1,372,396	218,150	113,021	1,138,539	584,810	318,221	3,745,137
Total Trips							
In-Vehicle Person	919,236	215,444	104,314	1,043,859	645,062	336,437	3,264,351
Vehicle Driver	612,284	152,800	78,204	724,401	462,665	231,003	2,261,356
Vehicle Passenger	306,952	62,644	26,110	319,458	182,397	105,435	1,002,995
Total Transit	386,632	30,174	13,697	168,398	35,090	25,666	659,657
Rail and Ferry	135,497	21,297	10,793	87,806	25,357	21,864	302,615
Bus	251,135	8,877	2,904	80,592	9,732	3,802	357,042
Bicycle	45,451	3,157	8,651	39,955	17,542	4,212	118,969
Walk	392,847	36,794	21,660	252,039	68,933	49,451	821,724
Other	54,119	5,328	2,950	18,495	17,188	4,337	102,418
Total	1,798,286	290,897	151,272	1,522,746	783,814	420,103	4,967,119

Source: Bay Area Travel Survey 2000

**Table E13. Work, Non-Work, and Total SAMPLE Trips for Station Area Residents by Proximity to Rail/Ferries and Density**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile			1/2 mile to 1 mile			
	Urban	High-Sub	Low-Sub/ Rural	Urban	High-Sub	Low-Sub/ Rural	
SAMPLE TRIPS							
Home-Based Work							
In-Vehicle Person	1,519	583	273	2,098	1,635	875	6,983
Vehicle Driver	1,364	546	264	1,899	1,538	805	6,416
Vehicle Passenger	155	37	9	199	97	70	567
Total Transit	818	112	57	536	184	108	1,815
Rail and Ferry	513	102	48	346	143	90	1,242
Bus	305	10	9	190	41	18	573
Bicycle	100	12	15	100	60	18	305
Walk	296	16	13	218	81	38	662
Other	61	1	7	27	29	6	131
Total	2,794	724	365	2,979	1,989	1,045	9,896
Non-Work Trips							
In-Vehicle Person	5,046	1,655	943	6,437	5,342	2,924	22,347
Vehicle Driver	3,595	1,162	676	4,626	3,757	1,992	15,808
Vehicle Passenger	1,451	493	267	1,811	1,585	932	6,539
Total Transit	1,012	90	45	544	119	67	1,877
Rail and Ferry	471	58	30	279	79	50	967
Bus	541	32	15	265	40	17	910
Bicycle	245	30	27	237	119	37	695
Walk	2,351	326	171	1,818	667	313	5,646
Other	197	30	16	111	82	35	471
Total	8,851	2,131	1,202	9,147	6,329	3,376	31,036
Total Trips							
In-Vehicle Person	6,565	2,238	1,216	8,535	6,977	3,799	29,330
Vehicle Driver	4,959	1,708	940	6,525	5,295	2,797	22,224
Vehicle Passenger	1,606	530	276	2,010	1,682	1,002	7,106
Total Transit	1,830	202	102	1,080	303	175	3,692
Rail and Ferry	984	160	78	625	222	140	2,209
Bus	846	42	24	455	81	35	1,483
Bicycle	345	42	42	337	179	55	1,000
Walk	2,647	342	184	2,036	748	351	6,308
Other	258	31	23	138	111	41	602
Total	11,645	2,855	1,567	12,126	8,318	4,421	40,932

Source: Bay Area Travel Survey 2000

**Table E14. Work, Non-Work, and Total SAMPLE Trip Makers for Station Area Residents by Proximity to Rail/Ferries and Density**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile			1/2 mile to 1 mile			
	Urban	High-Sub	Low-Sub/ Rural	Urban	High-Sub	Low-Sub/ Rural	
SAMPLE PERSONS							
Home-Based Work	1,046	260	142	1,102	707	365	3,622
Non-Work Trips	1,509	399	224	1,662	1,112	605	5,511
Total Trips	1,721	459	252	1,905	1,286	704	6,327

*Note: The tally of sample persons in this table sums tripmakers only once by trip purpose regardless of the number of trips the person made. Additionally, there is overlap between purposes when tallying the number of trip makers (residents who made home-based work trips also made non-work trips). For example, if a person made 2 home-based work trips, 3 home-based shop trips, 2 home-based social/recreational trips, 1 home-based school trip, and 5 non-home-based trips, s/he was counted as a tripmaker once in the home-based work category, once in the social/recreational category, once in the shop category, once in the non-home-based category, once in the non-work category, and once in the total trips category.*

*Source: Bay Area Travel Survey 2000*

**Table E15. BATS2000 Station Area Residents' Household Trip Rates and Transit Use by Proximity to Rail/Ferries and Density**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile			1/2 mile to 1 mile			
	Urban	High-Sub	Low-Sub/ Rural	Urban	High-Sub	Low-Sub/ Rural	
TRIP RATES							
Vehicle Driver Trips per Household	2.536	3.527	3.314	3.441	4.721	4.591	3.389
Transit Trips per Household	1.601	0.696	0.580	0.800	0.358	0.510	0.989
Bicycle Trips per Household	0.188	0.073	0.367	0.190	0.179	0.084	0.178
Walk Trips per Household	1.627	0.849	0.918	1.197	0.703	0.983	1.232
Total Trips per Household	7.448	6.714	6.410	7.232	7.998	8.350	7.444
TRANSIT USE							
Percent of Households Using Transit During Two-Day Survey Period	53.3%	31.6%	28.9%	34.3%	19.9%	23.0%	37.9%

**Table E16. BATS2000 Station Area Residents' Per Capita Trip Rates and Transit Use by Proximity to Rail/Ferries and Density**

Travel Characteristic	Proximity of Household to Rail Stations and Ferry Terminals						Total
	Within 1/2 mile			1/2 mile to 1 mile			
	Urban	High-Sub	Low-Sub/ Rural	Urban	High-Sub	Low-Sub/ Rural	
TRIP RATES							
Vehicle Driver Trips per Person	1.084	1.590	1.726	1.358	1.747	1.800	1.385
Transit Trips per Person	0.685	0.314	0.302	0.316	0.133	0.200	0.404
Bicycle Trips per Person	0.080	0.033	0.191	0.075	0.066	0.033	0.073
Walk Trips per Person	0.696	0.383	0.478	0.473	0.260	0.385	0.503
Total Trips per Person	3.185	3.027	3.340	2.855	2.960	3.273	3.043
TRANSIT USE							
Percent of Population Using Transit During Two-Day Survey Period	37.4%	18.1%	18.7%	18.6%	8.3%	12.2%	22.9%

---

## APPENDIX F

### TRAVEL CHARACTERISTICS BY PROXIMITY OF HOME AND WORK LOCATION TO RAIL/FERRY STOPS, WALKABLE BUFFERS

---

Table F1. BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries.....	F-1
Table F2. BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries.....	F-2
Table F3. BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Workers who Work in San Francisco .....	F-3
Table F4. BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – Workers who Work in San Francisco .....	F-4
Table F5. BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Workers who Work outside of San Francisco.....	F-5
Table F6. BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries – Workers who Work outside of San Francisco.....	F-6



**Table F1. BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries**

Proximity of Household to Rail Station or Ferry Terminal	Mode	Proximity of Work to Rail Station or Ferry Terminal		
		Work Within 1/2 mile	Work Greater than 1/2 mile	Total
Home Within 1/2 mile	<b>In-Vehicle Person</b>	<b>34%</b>	<b>74%</b>	<b>52%</b>
	Vehicle Driver	28%	68%	46%
	Vehicle Passenger	6%	6%	6%
	<b>Total Transit</b>	<b>42%</b>	<b>16%</b>	<b>30%</b>
	Rail and Ferry	24%	7%	16%
	Bus	18%	9%	14%
	<b>Bicycle</b>	<b>5%</b>	<b>4%</b>	<b>4%</b>
	<b>Walk</b>	<b>18%</b>	<b>5%</b>	<b>12%</b>
	<b>Other</b>	<b>2%</b>	<b>1%</b>	<b>2%</b>
	<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Home Greater than 1/2 mile	<b>In-Vehicle Person</b>	<b>67%</b>	<b>91%</b>	<b>85%</b>
	Vehicle Driver	62%	85%	79%
	Vehicle Passenger	5%	6%	6%
	<b>Total Transit</b>	<b>28%</b>	<b>4%</b>	<b>10%</b>
	Rail and Ferry	19%	2%	6%
	Bus	9%	2%	4%
	<b>Bicycle</b>	<b>1%</b>	<b>2%</b>	<b>1%</b>
	<b>Walk</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>
	<b>Other</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>
	<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Total	<b>In-Vehicle Person</b>	<b>60%</b>	<b>90%</b>	<b>81%</b>
	Vehicle Driver	54%	84%	75%
	Vehicle Passenger	5%	6%	6%
	<b>Total Transit</b>	<b>31%</b>	<b>5%</b>	<b>12%</b>
	Rail and Ferry	20%	2%	7%
	Bus	11%	3%	5%
	<b>Bicycle</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>
	<b>Walk</b>	<b>6%</b>	<b>2%</b>	<b>3%</b>
	<b>Other</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>
	<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**Table F2. BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries**

Proximity of Household to Rail Station or Ferry Terminal	Mode	Proximity of Work to Rail Station or Ferry Terminal		
		Work Within 1/2 mile	Work Greater than 1/2 mile	Total
Home Within 1/2 mile	<b>In-Vehicle Person</b>	<b>94,366</b>	<b>169,468</b>	<b>263,834</b>
	Vehicle Driver	78,192	155,369	233,561
	Vehicle Passenger	16,174	14,098	30,273
	<b>Total Transit</b>	<b>117,048</b>	<b>36,173</b>	<b>153,221</b>
	Rail and Ferry	66,046	15,444	81,489
	Bus	51,003	20,729	71,732
	<b>Bicycle</b>	<b>13,156</b>	<b>8,253</b>	<b>21,409</b>
	<b>Walk</b>	<b>49,543</b>	<b>11,159</b>	<b>60,702</b>
	<b>Other</b>	<b>6,070</b>	<b>3,294</b>	<b>9,364</b>
	<b>Total</b>	<b>280,184</b>	<b>228,346</b>	<b>508,530</b>
Home Greater than 1/2 mile	<b>In-Vehicle Person</b>	<b>632,402</b>	<b>2,619,760</b>	<b>3,252,162</b>
	Vehicle Driver	584,092	2,442,335	3,026,427
	Vehicle Passenger	48,310	177,425	225,736
	<b>Total Transit</b>	<b>266,492</b>	<b>119,339</b>	<b>385,831</b>
	Rail and Ferry	178,861	62,071	240,932
	Bus	87,631	57,268	144,899
	<b>Bicycle</b>	<b>8,437</b>	<b>48,426</b>	<b>56,863</b>
	<b>Walk</b>	<b>23,053</b>	<b>64,144</b>	<b>87,197</b>
	<b>Other</b>	<b>7,239</b>	<b>24,196</b>	<b>31,435</b>
	<b>Total</b>	<b>937,624</b>	<b>2,875,865</b>	<b>3,813,489</b>
Total	<b>In-Vehicle Person</b>	<b>726,768</b>	<b>2,789,228</b>	<b>3,515,996</b>
	Vehicle Driver	662,284	2,597,704	3,259,988
	Vehicle Passenger	64,485	191,523	256,008
	<b>Total Transit</b>	<b>383,541</b>	<b>155,512</b>	<b>539,052</b>
	Rail and Ferry	244,907	77,515	322,421
	Bus	138,634	77,997	216,631
	<b>Bicycle</b>	<b>21,593</b>	<b>56,679</b>	<b>78,272</b>
	<b>Walk</b>	<b>72,596</b>	<b>75,303</b>	<b>147,899</b>
	<b>Other</b>	<b>13,309</b>	<b>27,490</b>	<b>40,800</b>
	<b>Total</b>	<b>1,217,807</b>	<b>3,104,212</b>	<b>4,322,019</b>

**Table F3. BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Workers who Work in San Francisco**

Proximity of Household to Rail Station or Ferry Terminal	Mode	Proximity of Work to Rail Station or Ferry Terminal		
		Work Within 1/2 mile	Work Greater than 1/2 mile	Total
Home Within 1/2 mile	<b>In-Vehicle Person</b>	<b>25%</b>	<b>58%</b>	<b>32%</b>
	Vehicle Driver	20%	55%	27%
	Vehicle Passenger	6%	3%	5%
	<b>Total Transit</b>	<b>45%</b>	<b>20%</b>	<b>40%</b>
	Rail and Ferry	24%	4%	20%
	Bus	22%	16%	21%
	<b>Bicycle</b>	<b>6%</b>	<b>7%</b>	<b>6%</b>
	<b>Walk</b>	<b>21%</b>	<b>13%</b>	<b>19%</b>
	<b>Other</b>	<b>3%</b>	<b>2%</b>	<b>3%</b>
	<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Home Greater than 1/2 mile	<b>In-Vehicle Person</b>	<b>43%</b>	<b>70%</b>	<b>49%</b>
	Vehicle Driver	38%	57%	42%
	Vehicle Passenger	5%	13%	7%
	<b>Total Transit</b>	<b>52%</b>	<b>20%</b>	<b>45%</b>
	Rail and Ferry	34%	11%	29%
	Bus	18%	9%	16%
	<b>Bicycle</b>	<b>1%</b>	<b>2%</b>	<b>1%</b>
	<b>Walk</b>	<b>3%</b>	<b>7%</b>	<b>4%</b>
	<b>Other</b>	<b>1%</b>	<b>2%</b>	<b>1%</b>
	<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Total	<b>In-Vehicle Person</b>	<b>37%</b>	<b>66%</b>	<b>43%</b>
	Vehicle Driver	31%	57%	37%
	Vehicle Passenger	5%	9%	6%
	<b>Total Transit</b>	<b>50%</b>	<b>20%</b>	<b>44%</b>
	Rail and Ferry	30%	9%	26%
	Bus	19%	11%	18%
	<b>Bicycle</b>	<b>2%</b>	<b>4%</b>	<b>3%</b>
	<b>Walk</b>	<b>9%</b>	<b>9%</b>	<b>9%</b>
	<b>Other</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>
	<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**Table F4. BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries –  
Workers who Work in San Francisco**

Proximity of Household to Rail Station or Ferry Terminal	Mode	Proximity of Work to Rail Station or Ferry Terminal		
		Work Within 1/2 mile	Work Greater than 1/2 mile	Total
Home Within 1/2 mile	<b>In-Vehicle Person</b>	<b>53,759</b>	<b>30,180</b>	<b>83,939</b>
	Vehicle Driver	41,573	28,617	70,190
	Vehicle Passenger	12,186	1,563	13,749
	<b>Total Transit</b>	<b>95,798</b>	<b>10,623</b>	<b>106,421</b>
	Rail and Ferry	49,961	2,204	52,165
	Bus	45,837	8,419	54,256
	<b>Bicycle</b>	<b>11,960</b>	<b>3,515</b>	<b>15,475</b>
	<b>Walk</b>	<b>44,480</b>	<b>6,708</b>	<b>51,188</b>
	<b>Other</b>	<b>6,070</b>	<b>862</b>	<b>6,933</b>
	<b>Total</b>	<b>212,068</b>	<b>51,888</b>	<b>263,956</b>
Home Greater than 1/2 mile	<b>In-Vehicle Person</b>	<b>169,729</b>	<b>75,768</b>	<b>245,497</b>
	Vehicle Driver	148,526	62,123	210,649
	Vehicle Passenger	21,203	13,645	34,848
	<b>Total Transit</b>	<b>206,101</b>	<b>21,589</b>	<b>227,690</b>
	Rail and Ferry	134,310	11,642	145,952
	Bus	71,790	9,947	81,738
	<b>Bicycle</b>	<b>2,869</b>	<b>2,192</b>	<b>5,061</b>
	<b>Walk</b>	<b>11,633</b>	<b>7,242</b>	<b>18,875</b>
	<b>Other</b>	<b>4,847</b>	<b>1,720</b>	<b>6,567</b>
	<b>Total</b>	<b>395,179</b>	<b>108,511</b>	<b>503,690</b>
Total	<b>In-Vehicle Person</b>	<b>223,488</b>	<b>105,948</b>	<b>329,436</b>
	Vehicle Driver	190,099	90,740	280,839
	Vehicle Passenger	33,388	15,208	48,597
	<b>Total Transit</b>	<b>301,899</b>	<b>32,212</b>	<b>334,111</b>
	Rail and Ferry	184,272	13,846	198,117
	Bus	117,627	18,366	135,993
	<b>Bicycle</b>	<b>14,829</b>	<b>5,707</b>	<b>20,536</b>
	<b>Walk</b>	<b>56,114</b>	<b>13,950</b>	<b>70,064</b>
	<b>Other</b>	<b>10,917</b>	<b>2,582</b>	<b>13,499</b>
	<b>Total</b>	<b>607,247</b>	<b>160,399</b>	<b>767,646</b>

**Table F5. BATS2000 Weekday Home-Based Work Trip Mode Shares by Proximity of Home and Place of Work to Rail and Ferries – Workers who Work outside of San Francisco**

Proximity of Household to Rail Station or Ferry Terminal	Mode	Proximity of Work to Rail Station or Ferry Terminal		
		Work Within 1/2 mile	Work Greater than 1/2 mile	Total
Home Within 1/2 mile	<b>In-Vehicle Person</b>	<b>60%</b>	<b>79%</b>	<b>74%</b>
	Vehicle Driver	54%	72%	67%
	Vehicle Passenger	6%	7%	7%
	<b>Total Transit</b>	<b>31%</b>	<b>14%</b>	<b>19%</b>
	Rail and Ferry	24%	8%	12%
	Bus	8%	7%	7%
	<b>Bicycle</b>	<b>2%</b>	<b>3%</b>	<b>2%</b>
	<b>Walk</b>	<b>7%</b>	<b>3%</b>	<b>4%</b>
	<b>Other</b>	<b>0%</b>	<b>1%</b>	<b>1%</b>
	<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Home Greater than 1/2 mile	<b>In-Vehicle Person</b>	<b>85%</b>	<b>92%</b>	<b>91%</b>
	Vehicle Driver	80%	86%	85%
	Vehicle Passenger	5%	6%	6%
	<b>Total Transit</b>	<b>11%</b>	<b>4%</b>	<b>5%</b>
	Rail and Ferry	8%	2%	3%
	Bus	3%	2%	2%
	<b>Bicycle</b>	<b>1%</b>	<b>2%</b>	<b>2%</b>
	<b>Walk</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>
	<b>Other</b>	<b>0%</b>	<b>1%</b>	<b>1%</b>
	<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Total	<b>In-Vehicle Person</b>	<b>82%</b>	<b>91%</b>	<b>90%</b>
	Vehicle Driver	77%	85%	84%
	Vehicle Passenger	5%	6%	6%
	<b>Total Transit</b>	<b>13%</b>	<b>4%</b>	<b>6%</b>
	Rail and Ferry	10%	2%	3%
	Bus	3%	2%	2%
	<b>Bicycle</b>	<b>1%</b>	<b>2%</b>	<b>2%</b>
	<b>Walk</b>	<b>3%</b>	<b>2%</b>	<b>2%</b>
	<b>Other</b>	<b>0%</b>	<b>1%</b>	<b>1%</b>
	<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**Table F6. BATS2000 Weekday Home-Based Work Trips by Proximity of Home and Place of Work to Rail and Ferries –  
Workers who Work outside of San Francisco**

Proximity of Household to Rail Station or Ferry Terminal	Mode	Proximity of Work to Rail Station or Ferry Terminal		
		Work Within 1/2 mile	Work Greater than 1/2 mile	Total
Home Within 1/2 mile	<b>In-Vehicle Person</b>	<b>40,607</b>	<b>139,287</b>	<b>179,895</b>
	Vehicle Driver	36,618	126,753	163,371
	Vehicle Passenger	3,989	12,535	16,523
	<b>Total Transit</b>	<b>21,250</b>	<b>25,550</b>	<b>46,800</b>
	Rail and Ferry	16,084	13,240	29,324
	Bus	5,166	12,310	17,476
	<b>Bicycle</b>	<b>1,196</b>	<b>4,738</b>	<b>5,933</b>
	<b>Walk</b>	<b>5,063</b>	<b>4,451</b>	<b>9,514</b>
	<b>Other</b>	<b>0</b>	<b>2,432</b>	<b>2,432</b>
	<b>Total</b>	<b>68,115</b>	<b>176,458</b>	<b>244,574</b>
Home Greater than 1/2 mile	<b>In-Vehicle Person</b>	<b>462,674</b>	<b>2,543,992</b>	<b>3,006,666</b>
	Vehicle Driver	435,566	2,380,211	2,815,777
	Vehicle Passenger	27,107	163,781	190,888
	<b>Total Transit</b>	<b>60,391</b>	<b>97,750</b>	<b>158,141</b>
	Rail and Ferry	44,551	50,429	94,980
	Bus	15,841	47,321	63,162
	<b>Bicycle</b>	<b>5,568</b>	<b>46,234</b>	<b>51,802</b>
	<b>Walk</b>	<b>11,420</b>	<b>56,902</b>	<b>68,322</b>
	<b>Other</b>	<b>2,392</b>	<b>22,477</b>	<b>24,868</b>
	<b>Total</b>	<b>542,445</b>	<b>2,767,355</b>	<b>3,309,800</b>
Total	<b>In-Vehicle Person</b>	<b>503,281</b>	<b>2,683,279</b>	<b>3,186,560</b>
	Vehicle Driver	472,184	2,506,964	2,979,149
	Vehicle Passenger	31,096	176,315	207,411
	<b>Total Transit</b>	<b>81,641</b>	<b>123,300</b>	<b>204,942</b>
	Rail and Ferry	60,635	63,669	124,304
	Bus	21,007	59,631	80,638
	<b>Bicycle</b>	<b>6,764</b>	<b>50,972</b>	<b>57,736</b>
	<b>Walk</b>	<b>16,482</b>	<b>61,353</b>	<b>77,836</b>
	<b>Other</b>	<b>2,392</b>	<b>24,908</b>	<b>27,300</b>
	<b>Total</b>	<b>610,560</b>	<b>2,943,813</b>	<b>3,554,373</b>